Banks OF THE Boneyard

Turkey Day Issue
(Volume 15, Issue 3)
the journal of the association for computing machinery university of illinois student chapter

SIGGRAPH FORMS A POLKA BAND

SIGART SEEKS WORLD DOMINATION

WELLMAN PANICS ABOUT THE STATE OF SOUNDS AND VISIONS

THE INSIDE SCOOP ON MUSIC SENSATION VIOLET ARCANA

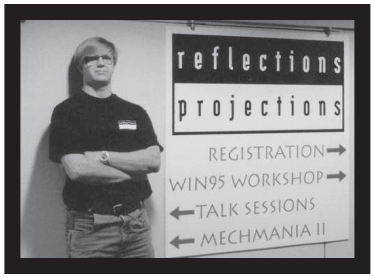
SHOCKING DETAILS INSIDE!

FIERY EDITOR OF DOOM LOOSENS HER WRATH ON SIGSOFT MEMBERS

PICNIC-GOERS CLAIM, "MY COW IS STILL KICKING"

From The Chair

By David Morgan



Greetings from the chair! With Conference '96, ACM@UIUC has settled into its normal operating mode: working towards the Next Big Thing: Sounds & Visions III (for SigMusic and SigGraph) and Engineering Open House for everyone else. Working on SIG projects can be tons of fun, especially in the frantic last few days before the "release deadline." If you haven't found a SIG to hang out in, I strongly encourage you to do so. While most SIGs are very project oriented, some, like SigCAS and SigIR, are purely discussion SIGs.

For the first time ever, ACM@UIUC has broken the 300 member mark! I'd like to personally thank everyone who has given their best this year to make it such a renaissance for ACM. In addition to increased membership and activity, we have been accumulating lots of new resources for you to use. Most notably, McBain, our new **PowerMac 8500** arrived in early August, and Be, Inc. has donated bleu, a dual 133MHz PPC603 **BeBox**, which should be arriving in mid-November. Omega, ACM's DEC Alpha 3000 AXP, which has an outstanding graphics board, has just been "clustered" onto the ACM workstation network, to be used for lots of cool OpenGL stuff, in addition to the usual office X Windows routine. Mmmm... Toys.

If you have any cool ideas for ways to use ACM resources or would like to see anything else in the office, let us know! We are here to serve you. Also, if there are any speakers or topics that you would like to see at ACM general meetings, we will do our best to get speakers that interest you. I can be reached via email at `acm@uiuc.edu`, or drop by the office any time!

The Banks of the Boneyard is a student publication of the UIUC Chapter of the ACM, the First Society in Computing, and does not necessarily represent, in whole or in part, the views of the University of Illinois, the Department of Computer Science, or the International ACM.

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What's in this Issue?

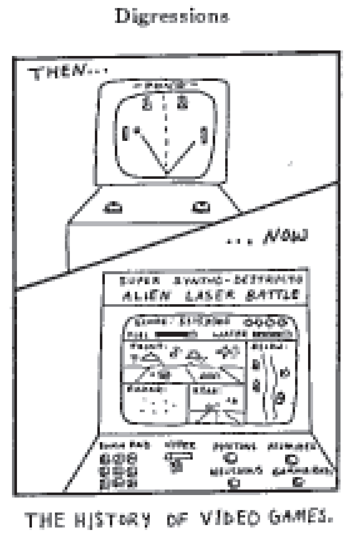
SigUPDATES

A Trip to the National Coin-op and Video Game Museum

By Mike Lee

Our mission was clear... to seek and destroy the MCP. Or maybe it was to enter the Dragon's Lair? Oil slick tailing cars in Spy Hunter? Test our mettle on the original Pole Position tracks? Or was it to stop KC from making the incessant sounds of "White Valkyrie shot the potion!" rumble through the room? Thus six brave explorers set out upon one Saturday 'morn to realize their fantasies... at the National Coin-Op and Video Game Musuem in St. Louis.

We all had different reasons for wanting to go to the museum, but ultimately the purpose of embarking on this daylong journey was a common one: to chill with a bunch of our friends in ACM. It began with Amy Ryan posting to `acminfo` asking for anyone who'd be interested in taking a field trip. Most of us hadn't taken a trip together so this was definitely a cool opportunity for us to get to know each other better.



Cartoon from the Nov. 1986 edition of the banks. And they thought video games were advanced back then!

I was rather surprised when I received that email because only weeks before the same thought had crossed my mind - I had just checked out a demo of Pac-Man from Micro$oft's Return of Arcade. Let me tell you, when they say it is true to the arcade original, they aren't lying. I had some serious flashbacks to when I was a young'un. I was fortunate enough to have an uncle who worked for Bally-Midway and had a sitdown Pac-Man game in his basement, and I remember many a night when we visited him and I spent hours honing my skills (to get that elusive 5th key!). Needless to say, when they mentioned the Coin-Op museum in St. Louis had serious Pac-Man gear, I knew I had to go, even if all the other people on the field trip did make fun of me for flexing my Pac-Man muscles.

Another event at the Arcade that everyone seemed to enjoy was FireTruck, a team game which consisted of many screeches as the fire truck careened into walls and crushed innocent electronic passers-by, but alas - they were simply the casualties of war.

Well, psychopathic obsessions aside, it was a very relaxed trip overall. After pulling ourselves out of bed before 9am (oh, the insanity!), we headed out to the Museum. Of course no trip to St. Louis is complete without visiting the Arch. We dined at The Old Spaghetti Factory, where Paul Watts challenged me to a duel with his steak knife - I was forced to defend myself with my balloon sword. We spent a good amount of time wandering around aimlessly (what else is there to do in that town?). Not to mention near-death experiences on the trip back (you don't get to tell gas station cashiers to radio the state police everyday). Well, perhaps I exaggerate, but all in all, you missed a pretty bitchin' trip. Maybe we'll see you at the next one.

For more information about the National Video Game and Coin-op Museum, see: http://www.coinop.org

SigSoft... An Epic

By Miguel Custer

I knew it was going to be a horrible evening when I approached the ziggurat some call DCL and the sounds of fighting emanated from within. I sighed inwardly as I realized that the SigSoft meeting was in full tilt. As I approached the massive iron doors and showed my sigil to the guards, one of them winked at me and said, "Better get in there Deacon, sounds like the Templars are getting a little rough again."

I smiled thinly at him and was nearly blasted back by the torrent of raw noise that spewed forth from the open portal. A gasp escaped my lips as I glimpsed the chaos within. Several followers of Templars David Kammeyer and Jason Lapenta had arranged the couches and chairs and turned the atrium into a mini fortress. They were of course being besieged by the zealous hosts of Templar Matthew Helige. Without using conventional weapons, they had managed to injure more than a dozen initiates in a brawl that would definitely not please the Great Lord of SigSoft, much less his superior godbeings, those who call themselves the Masters of ACM.

Quickly I ran into the foyer and shouted at the top of my lungs, "STOP! STOP THIS AT ONCE! Is this the way our great teacher taught us to argue? I think not!" In order to prove my anger I quickly brained the nearest initiate with my personal organizer, bringing chuckles from a few initiates of SigCAS, who were lazing around as usual on the second floor. With the fighting quelled and the templars in question in tow, I left for our personal meeting room, leaving the mess to be cleaned up by the novices.

As we entered the meeting hall and drinks were beginning to be served I slammed my organizer down onto the table.

"What was the meaning of that... that DEBACLE outside?!?!?!" I yelled.

Templar Matt spoke up instantly, "Jason is completely wrong I say! You cannot do such things within objects without massive amounts of work on the outside!"

Jason shot up and yelled back, "No! It is you who are wrong! I see no reason for such high level interactions within..."

I raised a hand to silence him and noticed Templar Adept Kaiser tittering to himself in a corner.

"Do you have anything to add to this discussion Adept Kaiser?!?!" I spoke.

"Nothing other than we haven't gotten anywhere this entire day of discussion, that and I need to go home and take care of my pwetty birdy Norbert," he replied.

"It can wait for a moment longer, let us begin this meeting like true followers of SigSoft! First I would like to hear the developments of our two main projects. Kammeyer! You speak first, and Templar Hellige, please refrain from interrupting for at least ten minutes," I commanded.

Templar Kammeyer rose slowly and began to speak. "Deacon, Templar Taylor and I met with the Great Lord of SigSoft last night and discussed our recent projects. At first we thought we would concentrate on the wargame that we think could revolutionize strategy gaming as we know it, but after discussing the development we thought it better to do something that would assist all other pure and devout programmers from around the world. Do you know how hard it is to keep track of a programming team when they are constantly modifying and creating new code for the same piece of software? We decided that we were going to create a new version control system that would centralize all code into a single repository and manage a checkin/checkout system and all versions of all code with ease to make a development team such as ourselves work a little easier. This would have definite impact on all forms of team programming in all fields. Hell, even those

(SigSoft - continued on page 9)

SigOPS SigOPS SigOPS SIGOPS SigOPS

By: Paul Swanson

The Special Interest Group for Operating Systems (SigOPS) is about learning the essentials of operating system development and design. One of our main projects is the White Paper Project, an effort to mirror and categorize online systems papers on the ACM web server. This is a great opportunity to learn about the current state of operating system research. It also provides a very useful service to others in search of these papers.

We're also working on the FTP filesystem project, to create kernel-level code for UNIX to mount remote FTP servers as local filesystems. The main goal is to learn about the internals of a UNIX kernel and the UNIX filesystem structure, but having a useful utility in the end is a nice thing too. We'll probably be working on John Criswell's Sparc SLC with Linux because we don't have access to a Linux PC to mess with the kernel. SigOPS hopes to procure a PC and a couple of hard drives (several smaller drives happens to be better than one big one in this case) to install both academic and commerical operating systems, like VSTa, QNX, Plan 9, L3, and Amoeba.

So if you're interested in playing with operating systems, learning about operating system research, or writing systems level code, come check us out. You can check out our webpage at `http://www.acm.uiuc.edu/sigops/`. Our meetings are every Thursday night at 8 PM in DCL (come to the ACM office first). Hope to see you there!

CODE TO LIVE
ACM REFLECTIONS | PROJECTIONS 1996
LIVE TO CODE

By David Morgan

Seeing cool speakers, getting jobs, partying down, and being tired with 200 of your closest friends. That's what Conference '96 was all about. Since January, the Conference Committee (Paul Bleisch, John Criswell, Joel Jones, David Morgan, Jesse Olson, Amy Ryan, Christy Schumacher, Jill Smith and Brian Swetland) has been putting together the event that culminated on the weekend of October 11-13, 1996.

Despite the fact that the Jean-Louis Gassée and Marty Tenenbaum, the original Keynote and Plenary Speakers of the conference cancelled for personal reasons, students came from across the Midwest to participate. The keynote speech was given by Alex Osdazinski, Be's VP of Marketing, and Erich Ringewald, VP of Engineering and author of the original Be microkernel. Tim Krauskopf, founder of Spyglass, graciously agreed on short notice to give the Plenary speech for Marty Tenenbaum.

Other conference talks included a series of three Windows 95 workshops by WinDevils, the famous Jay Kreibich TCP/IP workshop, Entertainment Graphics and Nintendo N64 development talks (also by Jay Kreibich), and a talk on the making of Cosmic Voyage by Donna Cox. Fresh out of OOPSLA, Joe Yoder gave a talk on Design Patterns. Ed Grossman and Annie Chabert gave a local/remote demo/talk on Habanero, NCSA's new collaborative Java environment. Eric Adams, former ACM EOH Chair, spoke about Groupware while Dale Schouten of Intel spoke on compilers and graphics. Jane Liu talked about realtime systems, Klara Nahrstedt gave a lecture on challenges in multimedia communications systems, and Joel Jones, ACM Grand Poobah of Antiquity, spoke on Java.

One of the biggest draws to the conference this year was Mechmania II: The Wrath of Const (a.k.a. "In space, no one can hear you recompile"). MechManiacs came to the university from as far as North Dakota and Kansas to build fleets of galactic conquistadors. Check out Greg Kaiser's MechMania II article for the whole scoop.

Be, Inc. employees deliver the keynote address in Grainger's Grand Ballroom

Students talk to CroweChizek about career possibilities during Job Fair '96

Aside from the travelling bands of Unihigh looters, the Computing Employment Fair on Friday was a marked success. Twenty three companies looking for geeks of all kinds packed the DCL Atrium on Friday. Amidst the din of students getting jobs, the "It's me, Mario!" and other assorted Nintendo N64 sounds were clearly audible from the SGI/CRAY booth. Roxanne Herrera, ACM's close corporate pal from Symantec, was onsite, and we took the opportunity to get some pictures of her next to McBain, the PowerMac that Symantec donated.

Other conference events included yet another successful round of CAVE tours, organized by Professor George Francis and Greg Kaiser, a Best of Sounds & Visions concert, and a bitchin' party Saturday night, featuring DJ Jazzy Keith Garner. For the Conference, we printed up lots of black T-shirts featuring the conference logo on the pocket and a "Harley-esque" logo on the back that reads: "Code to Live; Live to Code". We still have plenty of shirts left that are on sale in the office for $8 each. The conference webpages (`http://www.acm.uiuc.edu/conference/`) have been updated to include tons of pictures from the conference, an online feedback form, and a shameless T-shirt plug.

Most importantly, Conference '96 was made possible with the help of a number of friends to ACM. We would like to extend our thanks to the student volunteers who helped out with setup, teardown, and conference operations. We are also indebted to the faculty and friends who spoke at the conference. The conference wouldn't have been possible without the financial support of all the corporate sponsors who were at the employment fair. If anyone is interested in working on the conference committee or has any additional questions or comments, please feel free to mail `reflections@acm.uiuc.edu`.

SigGraph

...it's not the size that matters... right?

by Max Levchin

SigGraph is plain rockin' this semester! The new "gentler" philosophy (described in the previous Banks) has proven to be not only a good idea, but one that keeps the population of the group at its absolute maximum compared to (at least!) the past 4 years. As a matter of fact, SigGraph is currently larger than most of the ACM student chapters in the nation! But it's not the size that matters... right?

With many new members joining us this year, SigGraph is spending a lot of time doing workshops on all sorts of computer graphics-related material. Already, we have done a Basics Of Computer Graphics, Photoshop Tricks, Particle System Programming and Sprite-based Game Programming workshops. An OpenGL workshop was also held to prepare the programming talents in the group for some serious fun working towards the upcoming Sounds and Visions, a biannual concert of computer music accompanied by computer graphics, traditionally held in 1320 DCL. This collaboration of SigGraph and SigMusic has been extremely successful and highly popular not only among ACMers but the general campus crowd as well. The next (third) original concert, is scheduled for November 22nd. All the music and graphics presented will be brand new, so come on out and see what we have to offer.

In addition to these happenings, SigGraph is also working on the SigGraph Traveling Exhibit - a collection of digital and non-digital artwork by the group's members to be presented at local galleries and coffeehouses. Contact Steve Mycynek (`mycynek@uiuc.edu`) for additional information. **Artwork is still being accepted!**

Another budding project is our very own rendition of the Axis and Allies idea. A game development team has been assembled and since the plot is already defined, we don't have to spend three years figuring out what the game design will be like.

The second SigGraph contest is currently going on! This time the goal is to design and built the best graphics for the upcoming Sounds & Visions show. The winner (decided by popular vote of the audience) will receive a personal copy of *Computer Graphics: Principles and Practice* by Foley and Van Dam - the well-known computer graphics Bible.

Finally, impressed by the universal success of SigMusic's Dan Wellman and Steve Daniels at the Open Mic night in the Illini Union, Max Levchin and Mitch Fishman have joined forces in a band of their own. They are looking to perform Polka, Ska and Klezmer music. Mitch has professional experience playing accordion, guitars and percussion; Max has played the clarinet for eleven years. The group is currently seeking more musicians, preferably interested in computer graphics as well as Klezmer music.

So maybe you're not interested in Polka, but you would like to learn more about Computer Graphics, send mail to `siggraph@uiuc.edu` or just come hang out with the way-cool SigGraph crowd. Join us at 2240 DCL, Thursday nights at 7 PM. We usually meet around 6:50 PM in 1225 DCL (ACM office) and then move to 2240 or another location in DCL. See you there!

SigBiz

By Shreyas Shah

SigBiz got off to a rocky start this year, but we will be continuing the projects that were in progress last semester such as cu_food. We're also talking to companies such as Lante about giving a presentation concerning the nature of computer science (or any other technical field) in the business world. We may also have someone from the UIUC Patent office come speak about the process of securing a patent on a new idea.

SigBiz also has some **new** project ideas for this year. We're thinking about creating a protected website of the résumés of business and engineering majors. Any companies that do not have the staff or time to come here and recruit could access the résumés without leaving their offices. This would help narrow the gap for engineers looking to get into the business world and business majors who are interested in a more technical vocation. This project is long-term, possibly being finished late Spring semester or early Fall.

If you have any questions, mail `sigbiz@uiuc.edu`, or check out our website at `http://www.acm.uiuc.edu/sigbiz/`. Come to the ACM office (1225 DCL) to find out about meeting times.

The ACM Conference Committee would like to thank Intel for donating an Overdrive Processor which was raffled off during the Job Fair. Congratulations to Jessica Warth for winning the raffle.

D V O R A K
A New Way of Typing

By Paul Watts

Did you know your keyboard was *designed* to slow you down?

Well, not your keyboard itself, but your keyboard *layout*. You see, when the developer of the QWERTY keyboard (named, of course, for the first six letters of the top row) created it over 130 years ago, typewriters were the only machines that used keyboards. The first typewriters had the keys listed alphabetically, and sometimes if you typed too quickly on them the hammer on the typewriter would jam.

In comes QWERTY: Christopher Sholes redesigned the layout of the keyboard with the intention of slowing typists down, and thereby decreasing the chances the typewriter would jam.

As keyboards got better, however, people started wondering why we had this strange layout. In comes Dvorak: in the 1930's August Dvorak (pronounced `duh-VOR-ak`, unlike the composer) developed the Dvorak Simplified Keyboard, a totally new and completely different keyboard layout, designed to speed up typing. Dvorak keeps all the vowels, as well as many common consonants, on the home row. In Dvorak you can type the sentence "this is a test" *without leaving the home row*. Along with other major enhancements, the results are astounding:

1. 70% of typing occurs on the home row of the Dvorak keyboard, as opposed to 31% on QWERTY.

2. In an average typing day, your hands will travel 20 miles on QWERTY, whereas the same work on Dvorak makes your hands travel 1 mile.

If this is so good, why aren't we using it? Well, even before the turn of the century, the QWERTY was so ensconced in technological society that any attempts prior to Dvorak failed to achieve popularity. Only Dvorak's efficiency has helped it live to this day.

What are the advantages? Speed, mainly. Since your hands don't have to travel as much, once you become a fluent Dvorak user, your typing speed should increase dramatically. The second, at least nowadays, is to prevent RSI, repetitive stress injury. Unfortunately, there is no conclusive evidence one way or another whether Dvorak helps prevent RSI or not.

So how do you get this miracle of 1930's ergonomics? Well, there are plenty of sites on the Web which have procedures for converting to Dvorak, including Windows, Unix, Amiga, Commodore64, even BeOS.

How long can you expect to take to learn Dvorak? It depends. If you go full-on, always using Dvorak on every computer you use, you can expect to get up to speed in a month. If you expect to use other keyboards with the QWERTY layout, it will take you about two weeks to learn the keys, and another few months—depending on the frequency of use—to master it. Because Dvorak is a much more logical layout than QWERTY, it will *not* take you as long as QWERTY to learn. There are even typing tutors available on the Web for you to use.

For myself, I can say that I am going to learn Dvorak. It may take me a long time, and you may come into the ACM Office and see me getting aggravated with my keyboard for a couple months, but I think it will be worth it. What should you do? It's up to you. QWERTY is the de facto standard, but Dvorak is gaining momentum. Maybe sooner or later—if Dvorak becomes the sensible winner—we will all be typing much faster, much easier.

The Banks of the Boneyard staff encourages members to submit articles, artwork, and letters to the editor.

If you have anything you'd like to submit, or you'd like to work on the Banks of the Boneyard Staff, send us some email at:

`boneyard@acm.uiuc.edu`

SIG-BIO

By Robert Hyslop

This past month, SigBio has been holding regular meetings in a vain attempt to whittle down our ideas for projects. Besides our Virtual Web Anatomy Textbook, we hope to show a programming project at EOH this March. Ideas for this include: a computer simulation of a human (starting from the simplest principals such as total energy input and output), a workshop on computer modeling of biological molecules, and the addition of an attractive graphical front-end to a preexisting program which examines the kinetics of cellular translation (the cell's way of "building" proteins). As always, we welcome new members from all areas of study who have an interest in science and technology. SigBio meets in 1225 DCL on Tuesday nights at 6:15 (**NOTE time change**).

SigBio - Special Interest Group for Biocomputing. The UIUC SigBio Chairs are Romesh Khumbani (`kumbhani@uiuc.edu`) and Robert Hyslop (`hyslop@uiuc.edu`).

VIOLET ARCANA

By Dan Wellman

Violet Arcana is an electronic music band described as “Dreamy, ethereal, melodic ambient soundscapes for the surreal music listener.” Combining a blend of a subtle trancelike beat, synth bleeps, whispered processed vocals, and just a hint of dance, Violet Arcana creates a sound which is both interesting to listen to and ambient enough to leave on in the background. Formed in 1993, the band has used the Internet as their primary source of advertising and music distribution - you can buy their full length CD “In the Scene of the Mind” for only $8.00 through the Violet Arcana web site.

David Duddlestion, who now is the sole force behind Violet Arcana, was nice enough to take time out of his schedule working on a new album to answer our questions via an email interview.

Q. How has technology made or changed your music making techniques?

A. It is technology that lets me make music. We all have ideas in our head about a song that we want to create, but getting it from just a thought to the ear is hard when you don’t have any technical playing ability. There are now tools out there like sequencers that allow one to record and manipulate something until it sounds right.

Q. How has the Internet changed your marketing/business techniques?

A. The Internet makes it possible to bypass the music business and get the music directly to the people. I don’t have to rely on a label or distributors to put out the music and promote it. We can simply use the Internet for all of that and people can get a CD directly from us for less.

Q. What’s Violet Arcana doing these days?

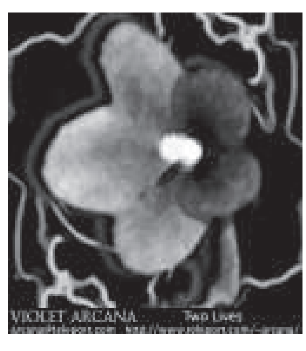
A. Working on a new project. The new project will be a compilation of assorted material created over that last several years. It will include tracks from the Serenity EP, remixed tracks from the “In the Scene of the Mind” album and several new tracks. Release date is set for January 1st 1997, but may be out sooner. Another new album will follow soon after.

Q. How did you get started in the music business?

A. Didn’t really do anything special... just started making music, recording it and putting it out for others to listen to and hopefully enjoy. I enjoy music so much and it makes me happy to know that there are people out there that take pleasure in listening to something that I created. It makes me feel like I’m doing something positive with my life.

Q. How does your music creation process evolve? Where do you start when you write a song?

A. It is different all the time, but most of the time I’m creating new sounds and I will be playing around with it... then I will somehow come up with a melody I like. From there I just start adding new stuff until I get bored of working on it. There is lots of stuff I have recorded and just never finished to the point where I feel it is good enough to release. It’s a real random process. Lately most of my ideas for songs have come to me while I’m sleeping and I will get up and sequence it right away. Of course I lose out on sleep and this has been a small problem for me. I’m trying to recover right now from a poor night’s sleep, but it is worth it.



Q. Do you have any favorite instruments?

A. The sampler... I can record all kinds of stuff into it and run it through some DSP... very powerful tool. The Emu E4K sampler is my favorite and I plan on doing most of my work on it. All my tracks lately have been all E4K.

Q. Do you have any favorite music-making techniques?

A. I like to sample everything and create loops. Once I have the loop in the sampler I play with it more and see if I can make it sound even better.

Q. Your vocals have a very rhythmic, trancelike sound to them. What inspires these, and how do you record them?

A. I like treating vocals as just another instrument in the mix and not the main instrument. Putting it in the background and adding lots of effects to it makes it trancelike and that sounds good for Violet Arcana style music.

Q. Do you write lyrics first or the music, or both together?

A. Together.

Q. What previous musical background have you had - i.e. music theory, piano, etc?

A. No previous music training... I think training might suppress the creative flow and force one to write music like everyone else. There are so many trained musicians that cannot come up with an original sound, because everything they know about music is someone else’s idea of what music is and how it should be created. I recommend sitting down and starting playing.... it takes a while sometime, but if you are passionate enough about it, then it will all start to come together for you.

Q. What do you recommend to someone who’s written a song and wants to get into the music business?

A. Just concentrate on the music and do what makes you happy. It is the process of making music that really counts and getting caught up in the whole music business compromises the music. If you love what you are doing and people enjoy your music, then everything else will just happen. You also need to be patient.

To learn more about Violet Arcana, hear some music samples, or order their CD, check out their web page at `http://www.teleport.com/~arcana`. Send Email to `arcana@teleport.com` to talk directly to the band.

Banks of the Boneyard, Tip of the Month:
A simple script for randomizing your .signature files

```
# This simple script was written by nyar@uiuc.edu. You may
# distribute it to anyone, as long as this header remains.

# The way it works: In your home directory, keep a bunch of files
# named .sig.1, .sig.2, etc. This script will automatically sense
# the number of .sig.#'s and randomly select one every time it's run
# (assuming of course that perl is located in /usr/local/bin/perl,
# if it's not, ask your sysadmin). In your .login file put the line
# "perl sigrand.pl" and your .signature will change every time you
# log on.

#!/usr/local/bin/perl
#get the number of .sig files
@number = `ls -l .sig.*`;
$number = @number;

#get a random number
srand(time);
$rand = int(rand($number)) + 1;

#make the new sig
$file = ".sig.$rand";
`cp $file .signature`;
```

(SigSoft - continued from page 4)

backward maniacs in our church's WinDevils section could use this. We'd also like to plan a CVS workshop so that others too may know this system of programming and begin to utilize better tools and better methods of programming."

I smiled happily. "Excellent, Kammeyer. I have heard rumblings of approval already from the Great Lord. Your idea has merit and you are commanded by Him to implement this immediately. Now, Templar Lapenta, you can tell me what you want to say before you fall out of your seat fidgeting."

"Deacon, whilst my brethren do their great work I have something concerning recreation. I would like to create a more violent, interactive, multi-player network game version of Capture the Flag using the layout of our campus as the battlefield. People from the dorms could log into their respective servers, form defensive and offensive teams, take control of vehicles and buildings, assassinate and annihilate other teams, and generally create large disturbances in their quest to take all the flags. There could be hundreds of people on at the same time and we could add more and more map sections and servers if popularity increases. We could start with simple objects and polygons and perhaps then move on to 3D maps of building levels and steam tunnels and perhaps add in a few civilians to mow down as well. I plan to call this project "Chaos Campus"! My only argument with Templar Hellige is that..."

I sighed and said, "Enough of that, that can be dealt with at a later date. These two projects are now our main concern. The Great Lord of SigSoft is pleased with our decisions, so pleased that he may forgive this minor disturbance that just occurred. Very well, I think we have accomplished a lot this meeting... Novice Michael, please wipe the drool from Adept Kaiser's mouth, I think he's been up too long again... anyway, let us move our respective ways.

With that, the templars and novices filed out until only I remained. I turned slowly and knelt before a dark shadow that hid in a corner of the room. "Well, my lord. Things go as you have predicted. We stand a good chance of getting many things done this year. Recruitment goes well, although we could use more programmers of graphics and graphical interfaces. These two projects should keep your spirited followers happy for at least a little while."

A deep, powerful voice emanated from the corner.

"Excellent, Deacon. I am pleased. We must keep up this pace if this year is to be our best. Now my final edict for today is to document the proceedings here to show the outside world how we work, and give the announcements to my associate, the evil dread being known as The Editor of the Banks."

I bowed low with humility. "Yes my lord."

With that the Great Lord of SigSoft returned to the heavens above and I now record the announcements that he commanded of me...

Announcements:

1) The Great Lord of SigSoft has commanded that two workshops be held in the near future. The first one, the CVS workshop, will be held in two to three weeks at DCL, more information to come. All are welcome to come and learn. The other workshop is on the mighty and mysterious language of Python, a code that goes well with C and C++ and may help us with our wargame later.

2) Templar Jason is seeking people to assist him in his great project, Chaos Campus. We hope that hundreds will flock to his just cause in bringing yet another addiction to CS majors so that we hard workers may get an easier ride through those nasty classes.

3) The Great Lord of SigSoft is looking for new novices to join our most holy of orders. You may come and be embraced on 6 PM on Wednesdays at 1102 DCL. Or just stop by the mortal office of the ACM and pester someone there (just make sure it's not the Fiery Editor of Doom, unless you're not particularly attached to your head and wouldn't mind it getting bitten off).

4) The Great Lord is also looking for someone for a most esteemed position. This position will be known as the Caretaker of Adepts. This job includes bathing and feeding of Adept Kaisers and that other one whose name starts with an "S". They are starting to smell, but they've been here so long that we don't want to lose their massive storehouses of knowledge.

So it was written, so it shall be done.

SigMusic

SigMusic by Jon E. Schultz II

The Special Interest Group for Computer Music is comprised of those who have interests in computers, music, and sound. We have a varied range of members from all different majors and all different levels of experience. Whether you're a beginner who wants to learn how electronic music is created or an experienced user who wants to expand your creativity and knowledge base, SigMusic is the place to be.

We are busily preparing for our third computer music/graphics concert, "Sounds & Visions: Decade." The concert will be held on Friday November 22nd in 1320 Digital Computer Lab. The time will be announced soon. We may also have another show on the 23rd, but that is yet to be decided. This year our concert will showcase over 15 composers, our largest concert to date. We are just finishing up the music so we can get the graphics started. From what has been produced so far, this concert promises to be our best! Want to know more? Show up to a meeting, or mail `sigmusic@uiuc.edu`.

In September, Dan Wellman gave a workshop on MIDI sequencing with Cakewalk Professional running on a PC. October's special event was a MOD/Tracker workshop given by Chris Richmond and Chris Barton. In the future we are looking to give a Soundblaster programming workshop. We are also going to try to take a tour of the experimental music lab here on campus.

For the programming buffs, we are looking for people to join our vocoder development team. A vocoder is an effect which takes two input sources, typically a human voice and a synthesizer tone, and makes the synth "speak" your words. We already have one version which we showcased at EOH last year, but now we want to make it even better! Our destination platform is a Pentium PC with a SoundBlaster, and we need people to write C code, assembly, sound routines and Fast Fourier transformations. If you're interested in learning about how these things work or are a pro and want to show your skills, join our team! Mail `sachs@uiuc.edu` for details.

SigMusic meets on Wednesdays at 7 PM in front of the ACM Office (1225 DCL) and then heads on over to room 1102. Send email to `sigmusic@uiuc.edu` for more information, as our workshops are often held in ISR.

SigUnix

By Jesse Olson

Greetings SigUNIX people!

SigUNIX is actively pursuing X development. Currently we are learning the basics of X programming. Our first project is to make the symbolic link command (ln) for X. This is just a beginner project to acquaint ourselves with X coding.

Our meetings have been regularly attended with students ready to learn X. These regular attendees will soon be coding X in their sleep. Oh, wait... we don't get sleep, so we'll be up at 4 AM coding.

Once we are used to programming in X, SigUNIX will diverge from porting unix tools. Many ideas have been suggested, such as a game of some kind, a filesystem viewer and other goodies.

Our meetings are in 1102 DCL at 8 PM on Wednesdays, but we can often be found beforehand in the ACM office (1225 DCL).

DECADE

A celebration of ten years of

SigGraph and SigMusic

UofI's Premiere Electronic Music and Computer Graphics Concert

Friday November 22
Saturday November 23
8pm, 1320 DCL

Come experience a concert unlike any other - featuring classical, ambient, techno, synthpop and more electronic music set to dreamlike works of computer graphics

Sounds & Visions

MECHMANIA II

MechMania II: The Wrath of Const
by Greg Kaiser & Brian Swetland

You're sitting in 1310 DCL at 11 AM on a Sunday morning. Jimi Hendrix's Star-Spangled Banner is filling your ears, when a star system shaped like the United States dances on the projection screen in the front of the room. Mechs begin jumping from star to star on the map, capturing caffeine and transporting it across the universe. What's going on? Is this some trippy dream? No, you've just caught the beginning of the competition for MechMania II...

MechMania II was the programming contest for this year's conference. Similar to last year's contest, MechMania, it began by turning the CSIL lab in 1275 DCL into a "war room." There were ten three-man teams from six different schools plotting their strategies, putting them into code, and debugging them. Each team was given seventeen hours of lab time to program their army of mechs to charge across the universe (a large number of star systems connected by paths in hyperspace), collect as much caffeine (in the form of flags) as possible, and bring it back to the team's base. Seems easy enough, until you toss in the fact that there's another team of mechs which want the caffeine as well, and whose programmers also have seventeen hours to develop the code for their mechs. A team could confront the other team's mechs to do battle, but that would also make themselves vulnerable. A team could bring caffeine back to their base, come back later and discover that their opponent stole it right from under their feet. Not quite as simple as it may first seem.

One of the fab four, Mike Lee, scrambles to finish code so that the contest is ready ontime.

The challenge of the competition attracted programmers from all over the Midwest to participate. Several teams were back from last year, including Bradley University's "Squirrels in Space(tm)", the defending champions from the University of Wisconsin, and Wichita State University's "Team Schmoe". New this year were teams Iowa State University's "French Fries or HashTables?", North Dakota State University's "/dev/hell", and several local UIUC teams: "Artificial Ruthlessness", "Groogroo Eat Groogroo", "Rushbug", "Pentamorons", and "Black Dawn".

Of course, the programmers would have nothing to do without the written, documented and tested API for them to interface their code with. This was the job of the veteran, four-man MechMania Crew. The man in charge, Brian Swetland, was also the head of last year's competition. Greg Kaiser was also a member of last year's crew, taking care of tournament concerns this year as he had the year before. Michael Lee and Andrew Dalke had been on teams in last year's contest, bringing their knowledge of the contestant's perspective to the Fab Four.

So for 15 hours on Saturday, and an additional 2 hours Sunday morning, the teams hammered out their code. Sunday at 11 AM, on the big screen in 1310 DCL, the teams played each other to determine the MechMania II champions. With ten teams, a 25 game regular season was first played, so each team got to play five other teams. The programmers watched the games in darkness with great anticipation to see how well their algorithms faired against others. Even a large number of Conference attendees not involved in MechMania II showed great interest in the games. Many of the matches were very exciting, with two of them ending in ties. Some of them were pretty amusing, as some team's algorithms did some rather unexpected things.

After the regular season, the teams were ranked based on their performance, and the top eight were placed in a single elimination tournament to decide the champion. The tournament atmosphere was lively. People were chanting for their favorite teams as the mechs hyperspaced across the screen, with groans and cheers shouted, depending on a team's performance. In the end, the "Squirrels in Space(tm)" took the championship, winning themselves three each of the book *Design Patterns*, the book *Advanced Programming in the UNIX Environment* and HP 20s calculators. "Team Schmoe" came in second, while the "Pentamorons" took third. Each of the top three teams will also receive a plaque.

The Iowa State team takes a break during a long day of coding.

MechMania II was an overwhelming success. The MechMania Crew would like to thank the Conference Committee for helping us out with food, funding, and an audience. We would also like to thank the CSIL Labs for providing the 20+ workstations needed to pull this all off. And we would like to especially thank Don Ray, who arranged the lab setups for us, and even stayed around until midnight Saturday night and showed up again at 8 AM Sunday to make sure things were all going well for us. None of this would have been possible without everyone's help.

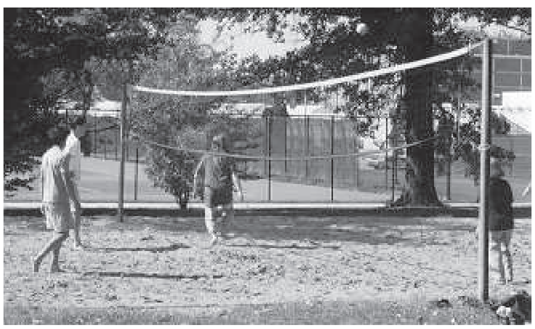
So MechMania II is over, and you think you have time to breathe, right? Wrong! Since each of the members of the MechMania Crew will be sticking around campus for at least another year, MechMania III is already on the drawing board.

Scenes and Sounds from the Fall Picnic

"My cow is still kicking"

By Jesse Olson

Pop cans hurtling towards trees at high velocities! Flaming cow death! Volleyball! These were just a few of the happenings at the ACM@UIUC fall picnic. This year there were many new goings-on as well as some of the same. Frisbee was the same as the previous year, but no one fell over a picnic table. Max Levchin, however, enjoyed a lofty perch on a grill while we threw garbage can lid frisbees at him.



New this year was the pop can winger. This item may commonly be known as a water winger or three-man slingshot. There weren't any balloons on hand, but we decided to fling liquids in containers anyway. One pop can burst in two, half of it snagged on a tree while the other half flew off into space. And then there was the short-range "pop cannon", shot at a tree 5 feet away! The impact caused the can to break into three parts - one part went far to the left, another far to the right. The center part imbedded itself on the tree.

The grill masters this year were Brian Swetland and Jesse Olson. There were few complaints about the quality of food, save for the occasional: "My cow is still kicking" and "I wanted a brat."

For its second appearance, the trampoline was used by many of the picnic goers. At the end, the trampoline's vinyl cover was removed, after having been ripped to shreds by the happy jumpers.

ACM@UIUC thanks all those who came to the picnic and helped make it fun. To see some pictures of the picnic as well as other ACM events this year, go to `http://www.acm.uiuc.edu/conference/pics96/kc/`

THE LINUX USERS' GROUP

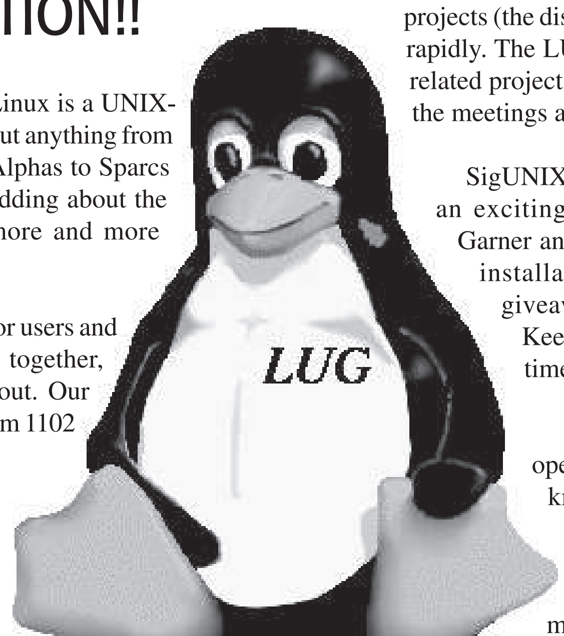
By Keith T. Garner

THANKS BALR FOR YOUR GENEROUS DONATION!!

For those of you who don't know, Linux is a UNIX-like operating system that runs on just about anything from x86 based machines to Power Macs to Alphas to Sparcs to your favorite brand of toaster. Just kidding about the toaster, but Linux **is** popping up on more and more platforms these days.

The Linux Users' Group is a forum for users and administrators of Linux systems to get together, work on projects, and help each other out. Our meetings are every Tuesday at 8 PM in room 1102 DCL.

This month the LUG would like to give a **great big thanks** to BALR for donating $2,000 to us to buy a machine to do our projects on. The projects we have been working on so far this year are: the UIUC distribution, a port of Broadcast over from the Mac, rehauling our web pages, and sponsoring various workshops. Thanks to BALR, we can expect the two computer-dependent projects (the distribution and Broadcast) to take off rapidly. The LUG is always open for more Linux related projects, so if you've got an idea, come to the meetings and let us know.



SigUNIX and the LUG will be sponsoring an exciting workshop in November. Keith Garner and Geoff Raye will present a Linux installation workshop. There will be a giveaway of Applixware from Redhat. Keep your eyes open for flyers with the time and date!

As always, the LUG is always open to new members of any skill and knowledge level. So come on out, bring your questions, project ideas, and enthusiasm! If you have any questions or comments feel free to mail me at `lug@uiuc.edu`.

SigVR

By Wyatt Haase

Tired of navigating in 2D? Cheesy Java applets got you down? SigVR has the cure. We are making a full assault on VRML 2.0. Last year SigVR put together a VR engine in DOS that uses two independent PCs to generate images in each eye of our homemade head mounted display. This year we are doing everything in Windows. The two main projects right now are:

1) Programming a VRML 2.0 browser with Microsoft Foundation class library and DirectX.

2) Creating the coolest VRML worlds this side of Mars.

We have tossed around several ideas about what VRML worlds to create first. Expect to see M. C. Escher worlds with various creatures walking about, defying the laws of nature. We will have walls that separate into cubes and morph to spheres that swing open like a door. The possibilities are amazing!

SigVR can use students of any skill level: programmers, Web nuts, or beginners just learning Scheme. If you are interested in a ripe new technology, look no further. Come to a meeting in 1102 DCL at 6 PM Thursdays, or email me (`sigvr@uiuc.edu`).

Look for the SigVR Web page (`http://www.acm.uiuc.edu/sigvr/`) to have plenty of VRML worlds in the near future.

Rappin' with SigArch

by David Morgan and Paul Bleisch

Yo, everybody clap ya hands!
SigArch is the baddest in the land!
We got a lab, we got hot air,
We got a lotta stuff dat we keep down there.
So check it, SigArch meets Thursdays at six,
We break as much stuff as we fix.

Now imagine the above poetic gangsta SigArch rhyme backed up by some funky improv electro-jive. Well, you won't have to imagine anything with the Wacky Tracker! SigArch is leaning a bit in the audio direction this year, with some basic A/D and D/A research, and some fun ideas like the Wacky Tracker, a portable audio sampler/sequencer.

We've also been looking at some short-term projects, such as analyzing the new Nintendo N64 controller interface and hooking it up to a PC. CamBot, SigArch's current legacy project, is also going strong, with plans to get the Network Interface Unit to boot by November 8 and a basic portable IP stack running on a BSDi box by November 15.

In addition to those dope projects, we have a new project slated for EOH. Endymion is 32-bit console gaming system similar to the old Genesis or Super Nintendo. Based around a MC68030 microprocessor, Endymion features a 64-bit graphics subsystem that handles parallax scrolling and sprite movement on a 640x480 TrueColor display. And because gaming isn't any fun without a funk groove, the unit will have a 32-channel wavetable sound chip on board. The Endymion Soul Design Team meets Sundays at 6PM.Mail `pbleisch@uiuc.edu` for more information. Word.

November Events:

thurs, nov 7
ACM General Meeting
4:30pm, 1320 DCL

fri, nov 8
ACM Movie Night
Toy Story and
Donald in Mathmagic Land
7pm, 1320 DCL

sat, nov 9
DirectX Workshop
1pm-4pm, L410 DCL

tue, nov 12
CVS Workshop
7pm, DCL

fri, nov 15
Come rock climbing with ACM at Vertical Plains
6pm, 1225 DCL

wed, nov 20
Linux Install Workshop
7pm, 1320 DCL

fri, nov 22
Sounds & Visions Concert
8pm, 1320 DCL

sat, nov 23:
Sounds & Visions Concert
8pm, 1320 DCL

tue, nov 25
Python Workshop
7pm, 1320 DCL

Many Talk About World Domination... We do something about it.

SigArt

By Mike Kreger

SigArt, the ACM special interest group for artificial intelligence, is focusing on a time-honored topic in computers: games. Nearly every competitive computer game you've played, from Tic-Tac-Toe to Mortal Kombat, involves some form of AI. Though it's hard to imagine ties between the monsters of Doom and the WOPR of WarGames, they are related. A long time ago, in a galaxy far far away, people tried to mimic the ways humans (and humanlike monsters) play games.

Of course, SigArt's gotta jump on the bandwagon. We're looking at the classic game of Risk, and creating a worthy opponent for the Risk enthusiast in all of us. This involves learning the rudiments of game theory and planning, along with playing lots of Risk. If you'd like to help out or just get involved with SigArt, we meet at 7:30 every Monday in the ACM office (1225 DCL) For more information, mail `sigart@uiuc.edu`.

SigCAS

By Ben Gross

SigCAS is a small but avid band of intellectual hedonists dedicated to at least one hour of good discussion and arguments per meeting.

SigCAS is the Special Interest Group for Computers and Society. We meet once a fortnight to discuss societal issues raised by computing technology such as: quality of life, ethics and information infrastructure impacts. In order to facilitate a high level of conversation, we meet at Murphy's Pub and discuss topics like information privacy and security, human factors, risks of computing, ergonomics, good books, the impact of standards, cryptography, and new law affecting the Net.

In our most recent meeting we discussed Phil Agre's recent Red Rocker Eater refutation of Stephen Talbott's Net Future piece "Privacy in an age of data." Phil's refutation and copy of Stephen's piece can be found at: `http://www.utopia.com/mailings/rre/arguing.about.privacy.html`. Phil mainly talks about differentiating between privacy and secrecy and a little on what he calls radical transparency.

The original Net Future piece (the second in a series) can be found at: `http://www.ora.com/people/staff/stevet/netfuture/1996/Oct1796_29.html`. The first in the series can be found at: `http://www.ora.com/people/staff/stevet/netfuture/1996/Sep2596_28.html`. Also see the related article "Commerce Changes The Privacy Equation" at `http://www.nytsyn.com/live/Latest/292_101896_134002_15064.html`

This article shoves the idea of movement from a mass production society to a mass customization society in your face. According to the author we should give up on even *imagining* that we have any privacy and surrender to the fact that we can get customized Levis and other services in trade for the loss. I'm not sure I buy that.

So if you have an opinion, think you might have an opinion, or you would like to get an opinion, come to the SigCAS meeting Tuesday 6 PM at Murphy's. Meetings this semester will be: Nov 19th and Dec 3rd. There are only two meetings left, don't miss them.

See `http://www.acm.uiuc.edu/sigcas/` for the latest information about the SIG meeting times and the mailing list, or mail `sigcas@uiuc.edu`.

WebMonkeys

By Robert Hyslop

For those who don't know, Webmonkeys is neither associated with nor actively discuses arachnids or zoology. We do, however, spread the joy of WWW knowledge to all the eyes and ears of those willing to learn. We kicked off this year with a salvo of workshops: encryption and authentication on the internet, SSL (secure sockets layer) and other security methods, and a workshop introducing Javascript (Netscape's somewhat new scripting language to do just about anything).

Projects and workshops in the works include: a series of beginning HTML workshops, more security discussions, possibly a PERL introduction, updating of the UIUC people list, and hopefully a *useful* WWW application for Engineering Open House.

It is also worth mentioning that Eric Huss, chair of Webmonkeys, has taken on the eternally-passed-around task of programming a WWW interface for the UIUC library's online database. This is a difficult task and Eric could use some help. If anyone is interested in this project or anything to do with the Web, please stop by one of our meetings on Wednesdays at 6:30 in 1225 DCL, or drop Eric Huss a line (`monkeys@uiuc.edu`).

SigMicro

By Paul Watts

Join SigMicro: we're the only SIG that asks the question "If you drop a DEC Alpha and a Pentium from a tall building at the same time, which would hit the ground first?" Answer: who cares? Ha ha ha...it's really funny, because in a vacuum they would hit the ground at the same time.

But seriously, this question of speed is a good question when talking about microcomputers. We at SigMicro believe just as cool stuff can be done on a $3000 microcomputer as can be done on a $30,000 workstation—and it is a lot more accessible. So what cool things can be done? Let's take a look inside SigMicro to find out...

WinDevils' DirectX game, now officially called Titan, is raging its way to a Windows desktop near you. We're getting into the coding stages, so now's your chance to get started in some serious DirectX code. Need to learn DirectX? We're going to resume our Windows 95 workshops, with one delving into DirectX details.

Meanwhile, the MacWarriors, those Mac-Daddies of the Macintosh, are beginning their AppleScript workshops. Unfortunately for our ACM Chair, they will not be covering how to create a "Print Dammit" button. Watch the ACM newsgroup and the MacWarriors home page for new and exciting workshops to come.

Looking for more? Want to do some cool things yourself? Think you have something cooler than what we're doing? Then come to a meeting and show us. The WinDevils meet on Wednesdays at 7 PM in front of the ACM office, and the MacWarriors meet in 310 Lincoln Hall, Sundays at 2 PM. Or if you prefer, peruse our Web site at `http://sigmicro.acm.uiuc.edu/`.

ACM Movie Night

Toy Story

&

Donald in Mathmagic Land

Friday, November 8

7 PM in 1320 DCL

THANK YOU!!

The Linux Users' Group would like to thank

BALR

for underwriting the PC to be used to develop the UIUC|BALR Linux distribution.

SigIR

By Ben Gross

SigIR is the Special Interest Group for Information Retrieval. We are interested in topics ranging from the theory of information retrieval, to aspects of the application of computers, to the acquisition, organization, storage, retrieval, and distribution of information. We discuss storage and search techniques, retrieval system modeling and evaluation, natural language processing, multimedia data management, cognitive modeling, artificial intelligence and knowledge bases, hypertext, man-machine interaction, text representation and indexing.

Meetings this semester will be: Nov 12th, Nov 26th and Dec 10th. SigIR meets at 6 PM in 1225 DCL (ACM office).

This semester we will have some faculty talk about their research in the area of information retrieval and it looks like we will have a demo or two of some yet to be released products from local startup companies.

More information including meeting dates, directions, and instructions for subscribing to the mailing list can be found at: `http://www.acm.uiuc.edu/sigir/` For additional information mail: `sigir@uiuc.edu`.

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Return or mail this form to:
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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

lug	linux users group
sigarch	architecture
sigart	artificial intelligence
sigbio	biocomputing
sigbiz	enterpreneurship
sigcas	computers and society
siggraph	graphics
sigir	information retrieval
sigmicro	microcomputers
sigmusic	music
signet	networking and security
sigops	operating systems
sigsoft	software development
sigunix	unix programming
sigvr	virtual reality
Webmonkeys	www development

MEMBERSHIP TYPES

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

- ☐ $40 for eight semesters
- ☐ $22 for four semesters
- ☐ $12 for two semesters

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

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