BANKS OF THE BONEYARD

From the Chair
1988 Engineering Open House

Again this year the **ACM at UIUC** is representing the Department of Computer Science at the **1988 Engineering Open House** next March. We hope to continue

I/O
Programming in the Dirt
Part One

[Editor's Note: I/O is an open-forum column designed to enlighten or amuse readers about some aspect of computer science, and encourage a response. Send any opinions to the ACM Office, 1204 W. Springfield, Room 201,or leave a message at 333-5828.]

Some of you reading this will never leave the ivory tower world of academia. Some of you will work for the government. And some of you will have other careers that don't require programming computers to perform useful, common

ACM Faculty Spotlight
Assistant Professor Alan M. Frisch

The "Faculty Spotlight" this issue highlights Assistant Professor Alan M. Frisch. Professor Frisch earned a B.S. in Mathematics from Carnagie Mellon University in 1976. After a brief two year stint developing programming for internal software at the Poughkeepsie, New York division of IBM, Professor Frisch entered the University of Rochester. In 1980 he received his M.S in Computer Science and began working on his Ph.D. at the University of Rochester. In 1983, in association with the University of Rochester, Professor Frisch went to the University of Sussex, England. Here, he worked as a type of visiting assistant, lecturing on artificial intelligence and working as a research fellow while finishing his thesis "Knowledge Retrieval as Specialized Inference." In 1986 Professor Frisch received his Ph.D. in Computer Science from the University of Rochester. In that same year he came to the University of Illinois because he felt it was an ideal situation for junior faculty and because he wanted to continue working with students.

Programming

applications all while meeting real deadlines.

Programming, but don't fit the description? This piece is written for you.

I write programs for a living. It isn't all I do, but it's a large enough part that the other parts depend upon it. My programming techniques, however, aren't real close to those you are being taught in college. I'm trying to earn enough to eat and pay my bills. You are (presumably) trying to get good grades. It was suggested to me that a few of you might be interested in hearing a different perspective of programming. One from beyond the university, out in the real world if you'll forgive the conceit. I'm always good for taking a few whacks at academia, so I agreed to present my viewpoint. Presented here are a few areas where the textbook writers and I don't see eye-to-eye.

Recursion:

Recursion is neat. Recursion is fun. It's a big selling point for some languages. It's a big deal in classroom programming. It's completely useless for most real applications. Unless you write compilers or certain types of complex database handlers, you will almost certainly never have a need to use recursion after graduating (or not graduating as the case may be). Oh sure, it's great for writing a "Tower of Hanoi" simulation — not exactly what one would call a steady meal-ticket. Simply put, recursion

has a few problems. Unchecked recursion tends to blow stacks. Controlled recursion with stack checks or large stack allocations tends to either execute very slowly or take up huge amounts of memory. There's too much piggy code out here already. Please don't add to it. And if, by chance, you do have a situation where recursion doesn't munch stack, the code can probably be done just as well or better using iteration.

"how about teaching students how to deal with a moronic technical support staff who, when presented with a problem with a software package, states 'Yes, that's a known bug.' and acts as if that proclamation should solve your problem ..."

The point may be raised that recursion is a valuable technique to learn, on the chance that it may be encountered at some point of a programmer's life. Teach it so that programmers may understand and possibly use it, the advocates say. I say that there are more universal techniques that could be taught in it's place. For instance, how about teaching students how to deal with a moronic technical support staff person who, when presented with a problem with a software package, states "Yes, that's a known bug." and acts as if that proclamation

should solve your problem and bring an end to the discussion? Or, closer to the heart of programming, students could be taught when it is, and when it is not appropriate to stick a kludge in their code. More on this later.

Using recursive code in most real-world situations is just not efficient. Iteration is easier to understand and debug. Easier to understand and debug translates to less time spent on code, which translates to more time spent elsewhere, which translates — depending on your priorities — to more free time or more money.

Commenting:

Yes, absolutely yes, you should comment a program and comment it well (you didn't seriously think I was going to say not to, did you?). There comes a point, however, where you can comment too much. Code is what you're producing, not documentation. If you find yourself spending more time writing comments that you are writing code, you're giving comments too high a priority. Comments are for debugging and future changes. That's something you won't have to worry about if you spend so much time writing comments that you lose your job or, worse yet, your company's client. Remember, the main reason to write a program is to make it perform the job you were hired to make it perform. Everything else is secondary.

This idea is at odds with many professors, T.A.s *et. al.* who teach that you cannot comment too much. You can. Further, you shouldn't have to fully re-comment a block of

Engineering

increased recognition for the Department: recognition that it's top ranked curriculum and research deserves. In the past, the Computer Science Open House (CSOH) has exhibited only a fraction of the innovative projects and brilliant research conducted in the Department. We have made great efforts last year to involve more students and professors in the CSOH, and the rewards just began to appear at last year's exhibits.

It is our hope this year to make an equal if not greater advance in the presentation of departmental advancement at the Engineering Open House. Our EOH chairman, Christopher Walquist, has already been hard at work getting interested people and professors together on projects that will be exhibited and judged in March.

The Engineering Open House was created not only to bring prestige to the University but also to get students, especially undergraduates, a chance to use the resources and knowledge here in developing the engineering concepts they have been taught.

Chris and his committee have an early jump on the 1988 EOH/CSOH organization this year and have much advice to assist anyone who might be interested in this year's CSOH. This is a great way to become acquainted with faculty and fellow members of the ACM as well as gaining valuable experience which will be quite marketable in the future.

—Robert Camp, Chairman

Faculty Spotlight

Since arriving at the University of Illinois, Professor Frisch has done work in both the areas of teaching and research. He has teaching experience in CS 348, An Introduction to Artificial Intelligence and , in another artificial intelligence class, CS 341 Mechanized Mathematical Inference or, as professor Frisch prefers to call it, Automated Deduction. In the area of research, Professor Frisch is mainly interested in artificial intelligence, especially the area of knowledge representation inference. "My major research activities concern the use of artificial intelligence to develop and study techniques whereby a computer can automatically perform deduction. In turn, these techniques are used to solve problems in the field of artificial intelligence." Currently, he is working on projects in the areas of knowledge retrieval, sorted deduction, and probabilistic logic, all of which are partially supported by a UIUC Research Board Funding.

1987 ACM Career Day
Look Who's Coming!

The **1987 ACM Career Day** will be held on Monday, November 9 from 9:00 am to 5:00 pm. It will be held in Rooms A & B of the Illini Union. For those of you who are not familiar with the concept of the ACM Career Day, the following story should shed some light.

Joe Senior was an ACM member who went to last year's ACM Job Fair (which is the exact same thing as a Career Day, so I will refer to it as that from now on). Joe was looking for a job, but he was not sure who he wanted to work for. Desperate for employment and on his last leg, Joe turned to his only last resort, the ACM Career Day. There Joe informally met with many companies and talked to their recruiters. Through these informal discussions, Joe found the perfect company to work for, got a contact through the recruiter, sent in a resume, and now he's making $30,000 a year. (His

sister, Jane, got a Summer Internship at the Fair too!)

It's that easy, REALLY! And this year it will be even easier because we've invited more companies than last year, including:

Control Data Corporation
Arthur Anderson & Company
BNR
Convex Computers
National Semiconductors
GTE
Lachman Associates
Procter & Gamble
Northrup
United Airlines
Kuck & Associates
Unysis
Harris Corporation
McDonnell Douglas
Gould
A T & T

Programming

code that essentially duplicates a previous one, wracking your brain to come up with new ways of saying exactly the same thing. How many times have you written code and then had to go back over it stuffing in worthless comments to satisfy your T.A.? Life is too short for this sort of silliness. And it costs time and money in the real world.

[Editor's Note: Part Two of I/O, Programming in the Dirt will appear in the next issue of BANKS OF THE BONEYARD, available in mid-November.]

—Michael Devore, Contributor

Faculty Spotlight

Professor Frisch also had some words of advice for students here at the University of Illinois. He feels the undergraduates should take more responsibility for their own education. "Just because a teacher says a section of a book is not going to be on a test, it doesn't mean you should not read it." Also, Professor Frisch urged undergraduates to take more interest in learning over grades and if their grades show they have a strong aptitude for academics, they should at least consider going to graduate school.

—Gus Alagna, Newsletter Staff

ACM Course Spotlight
CS 341 -- Mechanized Mechnical Inference

This column is one which has run from time to time in earlier issues of **BANKS OF THE BONEYARD**, and will hopefully become at least a monthly column here. Our purpose is to bring to light some of the lesser-known offerings of the Department of Computer Science, especially those which are interesting to a more generalized audience. While there is no question that the required core courses are far from few in number, there is some elective space in there which could perhaps be applied a little off the beaten track. It can help you stand out from the crowd, and who knows? - you might even learn something.

Our Course Spotlight this issue is on CS341, which bears the somewhat unwieldy name of Mechanized Mechanical Inference. As you may gather from the title, it is an AI course which concerns itself intensively with the methods of and theory behind automated deduction. A reasonable question to ask is, what precisely we are talking about here? Basically, the application of the computer to the task of proof, something which people are required to do every day and take for granted. Given a set of axioms, determine if a goal is consistent with these axioms, or determine new and potentially useful information.

There are at least two main thrusts to investigations into this field: one from a primarily mathematical standpoint, and the other more

concerned with software engineering. The first encompasses such things as computer theorem proving. Researchers at the University of Illinois at Urbana-Champaign produced the first proof of the famous Four-Color Map Theorem using a computer. The second area of interest involves such issues as program verification and inferential systems such as those applicable to database engineering.

The course currently has an enrollment of about 30 students, about half of which are graduates, and is currently being taught by Assistant Professor Alan Frisch. Professor Frisch comes well recommended as an enthusiastic lecturer. "One of the reasons I took the course was because I knew Professor Frisch was teaching it", says Mark Thompson, graduate student in CS. The material is primarily theoretical, and there are no explicit machine problems in the course. However, programming could well be involved in the project assigned to students for the end of semester.

Course prerequisites are CS273 or Math 314, and a 100-level programming course. CS348 is also recommended for providing an overview of the topic and of AI in general. The course is offered for 3 hours or 3/4 or 1 unit credit.

Fred Brunner, Contributing Editor

The EOH Tradition
And the ACM at UIUC

The **Engineering Open House** (EOH) is a tradition that stretches back many decades and gives our students the opportunity to demonstrate to family, friends, and the public the exciting work being done in engineering. The purpose of Engineering Open House is to inform the public, and especially prospective students, about engineering in general and engineering at the University of Illinois at Urbana-Champaign in particular.

EOH happens each year during the Friday and Saturday of the first week of March. The Departments in the College of Engineering present examples of their research and accomplishments in the form of exhibits that entertain and educate visitors while embodying the chosen theme. These exhibits compete for awards for originality, visual effect, interpretation of the EOH theme, and other more specialized categories.

There has been a lot happening in our department with the continuing acquisition of talented faculty, new equipment, and the expansion of the Digital Computer Lab facilities. Our repetoire of exhibits this year will reflect the innovative research made possible by this commitment to excellence, and should hold its own in the awards competition.

If you would like to participate in the upcoming 1988 Computer Science - Engineering Open House this year, call the ACM Office at 333-5828 and leave a message for Chris Walquist.

—*Chris Walquist, EOH Chairman*

SIG Update
Special Interest Groups at UIUC

The many and varied Special Interest Groups (SIGs) of the ACM at UIUC are, with few exceptions, up

Faculty Members and the 1988 Engineering Open House

Attention: Faculty members interested in helping the ACM with the 1988 Engineering Open House (CSOH/EOH).

If you have been contacted by a member of the ACM-sponsored EOH Committee and haven't been able to respond, or you are interested in helping or have project ideas, please contact Chris Walquist by phoning the ACM Office at 333-5828, or leave Chris e-mail at walquist@s. Please include:

- your name
- office telephone number
- login (to respond via e-mail)
- area of interest
- ideas about potential EOH projects
- time available to meet with students

and any other comments that you might have. Please respond as soon as possible as the new year is fast approaching!

—*Karla Karcher, EOH Project Coordinator*

and running now. If you see a SIG that interests you, come to their meeting and get involved. If one of the SIGs listed in the last edition of the newsletter intrigues you, and isn't staffed yet, help start it up! Drop by the ACM Office at 1204 W. Springfield (up the stairs) and leave me a note, or stop by one of the Exec Meetings on the third floor ACM Lounge, held every Friday at 3:00 pm. Or call me, Greg Freeman, at 344-0200.

The following SIGs have immediate openings for chairs: SIGOPS (operating systems) and SIGPLAN (programming languages). If you would like to help get these started, call me or drop by the Exec Meeting.

— *Greg Freeman, SIG Coordinator*

SIGGRAPH (graphics) -- The next SIGGRAPH meeting will be held at 7:00 pm, November 5 in the ACM Lounge at 1204 W. Springfield. Anyone interested in computer graphics is encouraged to attend. Pizza will be served!

— *Abbas Zein, SIGGRAPH Chairman*

SIGMICRO (microcomputers)-- SIGMICRO, the Microcomputer Special Interest Group of the ACM, meets Tuesdays at 6:00 pm in the ACM Lounge. This is a relatively new group, having just barely gotten off the ground last year, so we need your input! Whether you have an Amiga, Apple (any flavor), IBM PC, Tandy, or Commodore 64, SIGMICRO would love to see you.

The ACM Takes to the Ice!
The ACM First Annual SKATE DATE

Polish up that leather and sharpen those blades. We're going to have a rocking time at the UIUC Ice Arena next month. The first annual **ACM SKATE DATE** is tentatively scheduled for Friday, November 20. After 10:00 pm, we will have the entire ice arena to ourselves. The only cost to you will be 50¢ for skate rental if you don't own skates already. Have your ACM Membership Card ready for admittance and be prepared to have a great time on the ice!

Be sure to look in future issues of *BANKS OF THE BONEYARD* for a confirmation of the date and time of this slick event.

—Scott Ernsteen, Social Chairman

Career Day

Continental Bank
IBM
Amoco
SRI International
Tellabs
Rockwell

And, of course, many others.

—Pete Hlavach, Vice-Chairman

Begging for that One Important Job
ACM Vice-Chairman Tells All

Fellow members, as the ACM Vice-Chairman I have had a lot of encounters with corporate recruiters and representatives due to my organizing of the 1987 ACM Career Day and the arrangement of company speakers. From my experience I have collected a list of tips and practical guidelines which have helped me greatly with my interviewing. I would now like to share them with you.

Shake your interviewer's hand firmly with confidence in yourself. This gives a good first impression. Remember however, this is as far as things should go. Kissing, groping, and other sorts of familiar contact should be saved for plant trips.

Don't spit at your interviewer. Don't strike out at him and don't kick him. The U of I Placement Office frowns on these types of activities and you can get yourself into trouble. For this second reason, it is also a good rule not to carry fire-arms into an interview.

Don't fall to your knees and beg for a job at an "Information Night." These nights usually don't lead jobs, just interviews. Once you get an interview, then fall to your knees.

If you recognize an interviewer's last name and happen to have friends in common, then this is a good thing. It is not a good idea however, to recall the time that you and his or her spouse had a heated affair while the interviewer was off on a business trip. A good rule of thumb in this case is, "Some common interests are good, too many may not be."

There are also some signs of trouble in an interview:

- The interviewer looks at your GPA and asks you with a puzzled look,

Computer Fee Update

Many students here at the University of Illinois are complaining about the mandatory Computer Fee levied at the start of this semester. Most do not even know where the money goes. That is even more flustering.

The actual fee is twenty dollars, which is not all that much, and it is used very economically. That money goes not only towards maintenance of the existing computer labs, but also towards the installation of new ones.

Twenty dollars per person per semester is a small price to pay for keeping our University at the state of the art level in computer technology and capability. And, actually, it is comparably good rate. Some Big Ten schools are approaching a mandatory Computer Fee of $100-$150 per person. So, when one looks at the big picture, University of Illinois students have it rather soft ... it could be much worse.

—Rob Vann, Contributor

ACM Newsletter Name CONTEST!

There has been some sentiment in certain quarters of the University that the name of this distinguished publication could use some revamping. In other words, we want to change it, but being the democratic and egalitarian organization we are, we want you, the general membership, to tell us what to change it to. Naturally, there has to be some incentive. We're still working on that bit, but it could be something useful! Maybe next year's membership paid by us. Maybe a few Mac disks. Maybe an autographed photo of the Cray. You can give us suggestions on that, too.

The ideal name has something to do with the field of computer science/engineering, our campus, and preferably both. Oh, and no references to the Boneyard. Personally, I think it's an eyesore, and not something to be terribly proud of. Also, the Mechanical Engineering Department newsletter has some superficial, and possibly deliberate similarities to our current name, and we like to be able to state things unambiguously, right?

To remind the unperceptive, our current name is:

BANKS OF THE BONEYARD

Suggestions can be piped to myself, 3LDWAJD@UIUCNOSA on the Cyber, OR put in the ACM mailbox on the second floor of DCL, OR put in the ACM PLATO notesfile, OR dropped by the ACM Office at 1204 W. Springfield (but please leave some sort of message), OR dropped into campus mail, and sent to ACM c/o Newsletter Editor, 240 Digital

Begging

This school works on a 5.0 = A system, right?"
- The interviewer asks, "So tell me about what relevant computer knowledge you gained from working at McDonald's."
- Under the "Honors, activities, and organizations" section of your EPO resume you are forced to include a "1st Place 4-H Ribbon for Tablesetting" or else leave it blank.

Well I hope that these tips and observations help you during your interviews. I know that I try to follow them as closely as possible and usually suceed. Finally remember, it doesn't matter if you can't find a job

---

At Deadline ...

The ACM at UIUC is looking for students interested in participating in the **1987 ACM Regional**

Computer Laboratory, 1304 W. Springfield Av. Urbana IL 61801.

My idea for a new name for the ACM Newsletter :

_____

My idea for a really neat prize:

_____

So, folks, here's your chance to become famous immediately. Winners will receive exclusive satisfaction of having their idea

ACM INFOline
Dialup Information

The ACM at UIUC will be maintaining, on a trial basis, the **ACM INFOline** telephone number. By calling 333-5821, ACM members and nonmembers can listen to a recording of up-to-the-minute information about current and future ACM projects, lectures and general meetings.

—*Steve Glenner, Assistant Brewmaster*

because your parents weren't really using your room back home anyway.

—*Pete Hlavach, Vice-Chairman*

Programming Contest. Teams consist of 4 members, graduate or undergraduate. Turbo Pascal 3.0 will be the language used. The deadline to enter is November 13. Call 333-5828 for more information.

prominently displayed in the striking ACM newsstands around campus.
We don't want to rush you, but get those entries in ASAP. We'd like a name change to go through starting next year, and it takes some time for our graphics department to do a new logo, new letterhead, envelopes, bumper stickers, what have you.

P.S. If you really like the present name, send us a note, too.

WARNING: silence is consent.

—*Fred Brunner, Contributing Editor*

SIG Update

We will be setting up Machine Users Groups for learning and exchanging information about our favorite machines. Our next meeting will be at 6:00 pm Tuesday, November 3. Hope to see you there. If you can't make it, more information is available from Don Meyer at 367-0464, or Mike Schwager (schwager@m); office: 333-6116, home: 328-7163.

— Mike Schwager, SIGMICRO Co-Chairman

SIGUUCP (Unix* Users and C Programmers) -- SIGUUCP is tentatively planning a trip to visit AT&T in Naperville or Lisle. We would leave early in the morning and return late the same evening. The trip would be in late November or early December. Anyone interested in coming along should contact Doug Drew at 398-6003 or Leah Kleidon at 359-8832, or call the ACM Office at 333-5828 and leave a message.

We are still looking for people to work on our newsletter. Anyone interested in helping out can contact either Doug or Leah above. We can also be found in 269 EEB on Wednesdays at 7:00 pm, either holding a workshop or having a general meeting.

—Doug Drew, SIGUUCP Chairman

SIGNET (networking) -- Interested in learning more about data communications?
- Interested in learning how to connect to campus mainframes with your modems?
- Interested in electronic mail and how to send it anywhere in the world?
- Interested in knowing how to log on to your class mainframes from any remote site on campus?

If you said yes to any of these questions, come to a SIGNET meeting and check us out. For more information, call the ACM Office at 333-5828.

— Steve Norris, SIGNET Chairman

ACM Calendar of Events

Tues Nov 3	SIGMICRO Meeting	7:00 pm ACM Lounge, 1204 West Springfield, Room 301
Weds Nov 4	SIGUUCP Meeting	7:00 pm 269 Electrical Engineering Building
	NEWSLETTER STAFF Meeting	7:00 pm ACM Lounge, 1204 West Springfield, Room 301
Thurs Nov 5	SIGGRAPH Meeting	7:00 pm ACM Lounge, 1204 West Springfield, Room 301
Mon Nov 9	1987 ACM Career Day	9:00 am - 5:00 pm Room A & B, Illini Union
Tues Nov 10	SIGMICRO Meeting	7:00 pm ACM Lounge, 1204 West Springfield, Room 301
Weds Nov 11	ACM General Meeting	5:00 pm Topic: Engineering Open House 100 Metallurgy & Mining