

BANKS OF THE BONEYARD

*The Journal of the Association
for Computing Machinery at UIUC*



Rich Bloch
Editor

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1987 ACM/IEEE FJCC *The ACM at UIUC Goes to Dallas, TX*

The 1987 Fall Joint Computer Conference was held in the last week of October in Dallas, Texas this year. Three UIUC Student Chapter members were able to attend this year's event: Rich Bloch, Newsletter Editor; Jeff Wilson, Career Day Resume Book

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ACM Professor Symposium Speaker Rescheduling

The November 12 Professor Symposium featuring Professor Vinzinger has been rescheduled for Thursday, December 3. Please make a note of this important date, and hope to see you there.

The ACM Professor Symposia are held every Thursday at 4:00 pm in Room 115 Digital Computer Lab (DCL).

—John Moran, Professor Symposium Coordinator

From the Chair *The ACM Computer Proposal*

As stated in the Tuesday, November 3 issue of the Daily Illini, the Association for Computing Machinery (ACM) submitted a proposal for funds collected through the mandatory twenty dollar Computer Fee initiated at the beginning of this academic year.

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I/O *Programming in the Dirt Part Two*

[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.

Programming in the Dirt, Part Two is a continuation from last issue's I/O column.]

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Programming

Code Style:

This one is responsible for many a point lost on a program. Style is very important in the classroom, much less so out of it. It is an extremely broad category, and at its broadest, style encompasses about every aspect of programming. I'll define it a bit more narrowly and hit three points of contention.

One easy target is the use of goto's in a program. I don't want to spill too much ink over this issue, but suffice it to say, they come in real handy when used properly. I know I'm not the only professional who uses them. Let the purists scream; many of us have to soil our hands doing real work and this is one powerful tool we are not going to give up without a fight. I could write a whole column refuting those who wring their hands over how the horrible goto corrupts and warps the soul of an innocent program. I won't, since this argument has gone on for several years now and I probably can't add much to the volumes already written. I would just like to point out that the goto hasn't faded away, despite the witch-hunts.

Elegance is another biggie a student always gets nailed for. Aim for the elegant solution, the student is told. Forget it. When you're aiming in the real world, you're shooting through the mists of unclear or contradictory design specs, impossible deadlines, and flaky machines, coworkers, and bosses. Figuring the elegant solution under these conditions will run you way past your deadline, probably well past the drop dead

date. Instead, aim for the first patch of the target you see, and if you can't do even that, shoot at the darkest shadowy blob. With some skill and a little bit of luck (you'll find that luck plays a part in the coldest programming logic), you'll score a good enough hit to satisfy your client/boss.

A closely-related topic: kludges. You know, the last minute desperate hacks you add to a program to make

"If you are given a choice between meeting a deadline by stuffing in a horrible kludge or delaying the product while you neatly indent, properly structure, and make everything aesthetically pleasing, always, always, always make the kludge."

it work ten minutes before it's due. They're ugly, inelegant, guaranteed point losers. Academic authorities are universally adamant about (shudder!) hacking up code. Better it should be late. Bull! OK, I agree you should lose some pennies for kludging up your code. They make it harder to maintain and follow the logic. Still, just like the goto, there is a place for the kludge in a programmer's repertoire. It ain't a programmers Nirvana out here in the jungle, somewhere where we can all plan with cool heads and no rush. If you are given a choice

between meeting a deadline by stuffing in a horrible kludge or delaying the product while you neatly indent, properly structure, and make everything aesthetically pleasing, always, always, always make the kludge. A kludge can be ripped out later if necessary. You usually can't bring back a lost client or restore the damage to your reputation that a late presentation brings.

Flowcharting:

I was going to tell you that flowcharts are almost never used outside an academic environment by programmers (designers and managers are a different story), but I imagine most of you have already guessed as much. Only so much heresy per article.

Final Product:

Academia usually judges a final program by standards that differ wildly from what's important when you're trying to make a living. You often can get a passing grade if your program doesn't work, as long as it follows proper style and is well-commented. Wrong, wrong, wrong. A program must work (bugs are allowed: they tend to be rather unavoidable) in the real world. If you turn in a program which plain does not work, you should have to rewrite it until it does work to get a grade. That's the way it is in real life. Teaching otherwise dilutes understanding the true reason for a program's existence.

I can't stress enough to remember the bottom line: programs are not pieces of art to hang in a museum. They're written to accomplish a

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Programming

specified task. Nothing should detract from that goal. Many other aspects of programming are extremely important, but all pale before the simple truth. Remember it and your chances of success are greatly increased.

[Editor's Note: Michael Devore is a successful independent programmer/consultant and owner of **Devore Software & Consulting**. His company specializes in small business consulting and computer programming, and is a member I.C.C.A. Michael attended the University of Illinois at UC in the late 1970's and currently resides in Champaign.]

—Michael Devore, Contributor

1988 Engineering Open House Meeting

There will be a mandatory meeting for 1988 Engineering Open House (EOH) project heads. At the meeting, we will discuss EOH project concepts, which are simply statements that each project group will be working on for the Open House in March of next year.

This mandatory meeting will be held on Monday, November 23 at 5:00 pm in the ACM Lounge located upstairs from Room 201 at 1204 W. Springfield Avenue.

—Chris Walquist, EOH Chairman

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Dallas

Chairman; and myself, Pete Hlavach, Vice-Chairman. The three of us attended several committee meetings, including The Chapters Board Meeting and the Student Chapters Committee Meeting. The UIUC Student Chapter was the only student chapter represented at both of these meetings.

The first committee meeting focused on the problems that faced both student and local chapters of the Association. We learned a lot about the Lectureship Series and about overall ACM structure. As a student chapter, we are only one part of the ACM. The two primary qualities that make us a student chapter are (1) the fact that all of us members are currently college students and (2) that we are affiliated with a four-year university. In addition to student chapters, there are local chapters, those which are categorized by a common area. Members of local chapters are usually professionals in the computer science field or people with a strong interest in computers. There are also SIGs--special interest groups--whose members all have a common interest in one particular aspect of computer science. Finally, there is the Association itself, which has both student members and non-student members. The Association is very large and has members all over the world. It is possible to be a member of both the UIUC Chapter and the Association at the same time. We encourage all our members to do so, and an Association membership application has been included on the back of this newsletter for those who might be interested.

The second committee meeting was even more important than the first. It dealt directly with the student chapters. Currently, there are many student chapters across the nation which have not been active and have not kept in touch with the Association head quarters in New York. There is also supposed to be a national college ACM newsletter which goes out to all the student chapters. This newsletter has not been kept up, and communications between the student chapters has been weak. We offered to assist in restarting the newsletter, which we feel is an important step in strengthening student chapter involvement with the Association.

Another issue which was discussed at the second committee meeting was the National Programming Contest. The University of Illinois at Urbana-Champaign will be the site for our region's contest, the winners of which will go on to the National Programming Contest to be held in February in Atlanta, GA. It would be good for our chapter to present several teams at this event (and possibly win it!), so if you're interested contact Chris Gerrib through our office for details and sign up.

For more information about becoming an ACM member (either Student or National), or if you are interested in the ACM Regional Programming Contest, call the ACM Office at 333-5828 and leave a message, or stop by the Office located at 1204 W. Springfield in Room 201 between 9:00 am and 5:00 pm, Monday through Friday.

—Pete Hlavach, Vice-Chairman

Nominations for UIUC Teaching Awards

Nominations for the UIUC Campus Award for Excellence In Undergraduate Teaching are due by the end of this month. A nomination form is attached to this newsletter, along with a list of many eligible TAs and professors in the CS Department. To be eligible, a faculty member must have taught a minimum of one course at the undergrad level for at least four semesters. TAs are eligible with two semesters. Drop nomination forms off at the ACM Office at 1204 W. Springfield, Room 201.

--Anna Minkov, Departmental Committee

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Computer Proposal

The Computer Fee was developed to allocate computer systems availability across campus, with a strong focus on educational use. The money collected through the Computer Fee stays here on campus unlike tuition which goes to Springfield along with the tuition from all other Illinois state universities for general distribution. Not only does the UIUC dispense all monies collected from the Computer Fee, but the distribution of these monies is carefully managed and is immediately returned to the students for the intended purpose of computer use.

The ACM at UIUC, a highly active and well-established Student Chapter of the National ACM, sees its future continuing with the development of educational workshops. Past workshops sponsored by our Special Interest Groups (SIGs) have proven beneficial to the ACM membership in teaching skills and demonstrating software applications not taught through the Department of Computer Science. The progression of these workshops is

only limited to the resources needed to present the material: computers.

The ACM at UIUC, not unlike many businesses, is adopting the use of computers in management and education. This movement, however, mandates the need for a devoted site for use by all members, since the reservation of computers on campus for frequent use by large groups—such as the ACM membership—has proven inadequate.

Therefore, the ACM feels that it has proposed a request that closely adheres to the purposes and goals of the Computer Fee. The proposal includes: three Apple Macintosh SE systems, an Apple Laserwriter, and an Apple Macintosh II to be used as a network server and management workstation.

We hope that the Computer Fee Advisory Committee sees the benefits that the proposal would bring to the ACM at UIUC. Further details on how the proposed site would be operated will be released as soon as the ACM receives verification on the proposal from the Computer Fee Advisory Committee.

—Robert Camp, Chairman

1987 ACM Regional Programming Contest We Need Teams!

The 1987 ACM Regional Programming Contest is coming in December! The ACM at UIUC is looking for student teams interested in participating in this prestigious event. Teams consist of 4 students—graduate or undergraduate—at the University of Illinois. And every team has their choice of programming languages, provided that your code will run on an IBM PC/AT system, and you provide source diskettes for contest judges. No programming libraries or subroutines will be permitted.

This year's Regional Contest will be held here, on campus. And remember, winners of the ACM Regional Programming Contest are eligible to participate in the 1988 ACM National Programming Contest held early next year in Atlanta, GA. The ACM executives are planning a big incentive for Regional winners!

The deadline for team sign-up is Friday, November 20.

For more information, contact Chris Gerrib at the ACM Office (333-5828). Or stop by at 1204 W. Springfield, Room 201 and sign your teams up.

—Chris Gerrib, Contest Director

The ACM Exam File Just in Time for FINALS

The ACM Exam File is growing steadily. We currently have about 100 exams available to help you study for CS/EE and CE exams. The ACM Exam File policy is that any ACM member interested in checking out an exam must leave their membership card at the ACM Office, where the exams are kept. When you've finished with the exam, turn it back in to the ACM Office and pick up your membership card.

The ACM is still collecting old exams from its membership to be placed in the ACM Exam File. We are looking for copies of exams for any courses in computer science, mathematics, as well as introductory physics and chemistry. Stop by and drop off your exam, we'll copy it and remove your name from the duplicate, and return the original the next day.

The ACM Exam File, located in the ACM Office, is open to all ACM members as an aid in their coursework. If you have any old exams you wish to donate, please stop by the ACM Office at 1204 W. Springfield, Room 201 or call 333-5828.

—*Scott Ernsteen, Social Chairman*

1987 Professor Symposium

Professor William Kubitz

On November 5 at 4:00 pm in Room 115 DCL, the ACM held a Professor Symposium featuring Professor William Kubitz. The topic presented was "VLSI Design and Object-oriented Computer Graphics."

Today, chips are becoming increasingly complicated. They are getting smaller with high-powered currents which increase capacitance. Chips of two, three, and even four layers of metal are not that uncommon. Presently, there is no abstract representation for high-level architecture, unlike boolean expressions for low-level design.

The idea behind high-level architecture is a database with a linked-list system containing all the connections within a layer of the chip and between other layers. From this system, the position of fixed modules within a layer is determined. Then the variable-shaped molecules are pieced together like pieces of a puzzle to fit within the chip according to their connection with other modules. Currently, only good configurations can be determined, with no

guarantee that they're the best.

Professor Kubitz also talked about graphic systems used for research. Two that he talked about were GKS and PHIGS. GKS uses vector-graphics which is surpassed by PHIGS which is done via raster-graphics. PHIGS supports 3-D graphics with modeling hierarchy. Today, Professor Kubitz and Professor Cambell envision an ideal graphic system at a high level of abstraction. High-level objects would be manipulated in a way that would take in account the smaller objects that it would be made up of. Presently, there is no conventional language for this and it would need to have its own language developed.

As a reminder, the Thursday, November 12 Professor Symposium featuring Professor Vinzinger has been rescheduled for Thursday, December 3. Please make a note of this important date, and hope to see you there.

—*John Moran, Professor Symposium Coordinator*

The ACM Slips Up First Annual ACM SKATE DATE Postponed

The First Annual ACM SKATE DATE has been postponed until further notice. Originally scheduled on Friday, November 20, it looks as if this slick event has all but dried up. Keep reading **BANKS OF THE BONEYARD** for a rescheduling of the ACM SKATE DATE.

—*Scott Ernsteen, Social Chairman*

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The ACM and Social Events

The Moral of the Story is ...

By the base of farmer Brown's shed stood an ant hill. There, ants busily worked to maintain the quality of life that ants are accustomed to in ant hills. The ants had an acquaintance named Charlie. Charlie was a grasshopper. The ants would talk to Charlie, but they really thought very little of him. In the spring, Charlie hopped around without a care in the world, while the ants worked hard at repairing the ant hill. In the summer, when the days were long and hot, Charlie would rest as the ants worked and sweated hard, toiling to gather food for the winter. At night Charlie went out to play as the ants slept on their hard beds in preparation for tomorrow's busy schedule. In the fall Charlie romped through the leaves while the ants made final preparations for the long winter. Late in the fall, Charlie died in his sleep when the first frost came.

The winter was long and cold for the ants. They turned against each other in the rigid confinement of their ant hill. Finally spring came, and farmer Brown sprayed their hill with pesticides. Their skin burned and toxic fumes filled their lungs. None survived.

The moral of this story? **Go to ACM social events.** Life's too short to spend couped up in your room studying. Get involved with the ACM at UIUC and meet lots of fun people. You'll never regret it. For more information, contact the ACM Office at 333-5828, or stop by the Office located at 1204 W. Springfield Avenue, Room 201.

—Pete Hlavach, Vice-Chairman



ROGER SIMMONS PROUDLY CATCHES HIS FIRST PAISLEY.

Bits and Pieces

The **BANKS OF THE BONEYARD** newsletter staff would like to welcome back Tom Begnel and his cartoon "Bits and Pieces". Tom, currently co-oping at Monsanto, will again be working on the newsletter this spring.

—Newsletter Staff

ACM INFOline

By calling 333-5821, the **ACM INFOline**, ACM members and nonmembers can listen to a recording of up-to-the-minute information about current and future ACM projects, lectures and meetings.

—Steve Glenner, Technical Advisor

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SIG UPDATE *Special Interest Groups at UIUC*

The semester is now coming down to the wire. The ACM at UIUC Special Interest Group (SIG) support is still going strong. This would be a perfect time to get involved in SIGs this semester and next semester. Leadership positions open in many SIGs at the beginning of the semester. However, to take a leadership position, you SHOULD be involved in a SIG now. So look at the calendar, note the times of SIG meetings, and become involved in SIGs today.

SIGUUCP workshops are held every Wednesday in 269 Electrical Engineering. Come to these workshops, and learn that there is more to UNIX than "vi mp1.p!" These informative workshops will teach you how to change the computer from a feared adversary into a helpful and fun tool.

At the next SIGGRAPH meeting, which will be held November 19, Mike Schwager of SIGMICRO and Lionel Hummel will present the graphics capability of the Commodore Amiga, a microcomputer with simply amazing graphics capability.

Again, if you would like to be involved with a SIG, stop by the ACM Office during my office hours (1-3 Thursdays), send electronic mail (my address is gfreeman@s.cs.uiuc.edu), or call me at 344-0200. I look forward to hearing from you and seeing your involvement in the SIGs here at ACM at UIUC.

—Greg Freeman, SIG Coordinator

SIGMICRO/SIGATARI (Atari microcomputers)—Hello, and welcome to the first edition of the SIGATARI section in "SIG Update." SIGMICRO has been doing some serious expanding into the areas of specific microcomputers. An example of this is, of course: SIGATARI. I will be guiding you along with SIGATARI in your favorite newsletter and will also serve as a temporary chairman until something official goes down. So, to start everything off, I would like to re-publish an article that was submitted by myself to the Champaign-Urbana ST Users Group newsletter (CUSTUG). The following is a partial list of computer bulletin board systems (BBS) and computer services that are located in the Champaign-Urbana area:

Local Bulletin Board System Numbers for the Champaign-Urbana/Rantoul Area (217)

BAUD=max baud rate. 7 or 8 data bits, no parity, 1 stop bit.

NAME:	PHONE	BAUD	HOST	COMMENTS:
Band-Aid	328-3500	1200	C-64	Commodore
Bloom County	359-4450			
Bonnie's	356-7763	2400	C-64	Commodore
CCSH1	893-0453	300	CoCo	Supports Atari
Chmpgn FIDO	359-3431	1200	PC	Not nationally networked
Chmpgn Techie	359-3431			
CU Apple Users	359-8292	1200	Appl	II and Mac support
Conversat. BBS	359-3303			
FBN	359-2874	2400	Z100	Conversation
Hackers Anon.	333-8301	2400	PC	Amiga and IBM Support
HAL Weather	367-5547	2400		Weather Information
Infonet	384-0605	1200	PC	Information & Advice
LawBoard	352-6118	2400	PC	Law, Fido, eve. & weekend only
Montezuma	893-3772	1200	C-64	Commodore
NFLCP	359-9118	1200	Z100	Cable TV Programming
Pseudo-BBS	356-0044	2400	PC	MS-DOS Software
Stage Door	328-6015	2400	PC	Arts & Theatre
Starship MPC	356-8056	1200	C-64	Commodore
Suburbia	337-6312	1200	C-64	Supports Atari
Tranquility II	384-8173	2400	Amig	Conversation
UniCom BBS	384-8224	1200	ST	ST and Atari Software
UnNamed BBS	359-6636	1200	PC	MS-DOS, Fido
Viewpoints	351-8284	1200	C-64	Conversation, Atari

—Eric Sean Parham, Contributing Editor
SIGATARI Chairman-Elect

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SIG Update

SIGART (Artificial Intelligence)—The main goals of SIGART are to promote interest in the fast growing field of AI, and to increase communication between the various departments on campus which are involved in AI research. At our general meeting in October we discussed our plans for this year. They included: continuing our series of lectures by faculty members involved in AI research, holding LISP workshops (maybe writing an interesting program in LISP for EOH), and holding informal discussion groups. If you are interested in joining SIGART, or helping out with any of the above, please contact one of the following people:

Jeff--lectures, LISP workshop, EOH
Phone: 332-4078

Fred--discussion groups
Phone: 332-4078

Subutai--general questions
Phone: 367-1970

or leave a message at the ACM Office (333-5828).

— *Subutai Ahmad, SIGART Chairman*

SIGGRAPH (graphics)—During the next SIGGRAPH meeting Mike Schwager will demonstrate computer graphics on an Amiga microcomputer. Mike says "The Amiga is a novel microcomputer architecture that has custom hardware for spectacular graphics and pizza." Mike will demonstrate

ACM Calendar of Events		
Thurs Nov 19	SIGGRAPH Meeting	
	7:00 pm	
	Room 237 Digital Computer Lab (DCL)	
Fri Nov 20	ACM Regional Programming Contest Sign-up Deadline	
	5:00 pm	
	ACM Office, 1204 West Springfield, Room 201	
Mon Nov 23	1988 Engineering Open House (EOH) Meeting	
	5:00 pm	
	ACM Lounge, 1204 West Springfield, Room 301	
Weds Dec 2	NEWSLETTER STAFF Meeting	
	7:00 pm	
	ACM Lounge, 1204 West Springfield, Room 301	
	SIGUUCP Meeting	
	7:00 pm	
	269 Electrical Engineering Building (EEB)	
Thurs Dec 3	ACM Professor Symposium Presents:	
	Professor Vinzinger, Dept. of Computer Science	
	Topic to be announced	
	4:00 pm	
	115 Digital Computer Lab (DCL)	
Sun Dec 6	1987 ACM Regional Computer Programming Contest	
	12:00 pm - 5:00 pm	
	Location to be announced	

commercial ray tracing, 3-D rendering and animation packages. He will also give an overview of the Amiga's custom hardware and its graphics libraries. So join us in finding what a Blitter is "in a pizza-oriented environment" as Mike puts it. The meeting will be held on November 19, in Room 237 DCL.

— *Abbas Zein, SIGGRAPH Chairman*

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