



Department of
Computer Science
Newsletter



PRINTOUT

Volume 3

Number 1

PRINTOUT, the newsletter of the Department of Computer Science of the University of Maryland at College Park, is published sporadically and distributed to faculty, staff, and students in the Department. Opinions expressed in signed articles may be those of the author, but no opinions represent the policy of the Department, or of the College Park Campus, or of the University.

Contributions may be submitted to the editor, and unless they are obscene or seditious they will probably be used, but minor editing may be done. Complaints directed to the newsletter will be investigated and publicized when possible. It is well to keep in mind however that the Department is subordinate to higher levels of administration, not the other way around; and, the Department does not provide computing service to the campus. Complaints in these areas are best directed to other publications.

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PRINTOUT

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A "contest" is usually distinguished from other forms of written solicitation (a homework assignment in CMSC 250, say) by the offering of a prize for the best response. (One might say that the grade awarded in CMSC 250 is a sort of prize, and a course viewed as a contest does have the virtue that everybody wins something, even if it is only "NGR".) In any case, PRINTOUT is placed in a difficult position when it essays a contest, for lack of reasonable prizes. Most of what we might offer is unreasonable, for example:

- A) A free course. Aside from the difficulty that there might be little demand for such a prize, the only way it could be worked up on the sly, then report to the Registrar that his records had been bungled by their office. Since so many records are bungled, this would probably be believed.
- B) A good grade. There is too much uncertainty here about which course and which instructor, and what constitutes a "good grade."
- C) Computer time. Again, there might be little demand for this offering, and since the Department is not the owner of the prize, dispensing it might be awkward.
- D) Memorabilia. Although we do have a considerable stock of useless, interesting objects, perhaps there is little interest in a styrafoam coffee cup that J. Gannon has turned inside out during a dull colloquium, or a complete listing of the IBM 704 FORTRAN II compiler (in SAP), or a copy of the oldest Incomplete not made up by a student (c. 1968) on file, etc.

CONTESTS

It therefore seems best to offer only the limited form of immortality which a newsletter has available (and incidentally try to commandeer some copy for the next issue) by offering only publication (no page charges) with or without credit, as the winners choose.

TECHNICAL LIMERICKS

The best original computer science limericks will be printed in the next issue. Although filth will not disqualify an entry, neither will it enhance its chances. As an example of a limerick which will not win the contest, consider:

A pushdown acceptor named P
 Accepted sets for a fee.
 But with some, it is true,
 P has nothing to do:
 Because they were not context-free.

This limerick will not win because, having been given here, it will not be original; its second line doesn't quite scan; and its technical content, while not in error, is not in the most popular part of computer science.

UNIVAC 1100 HORROR STORIES

The most outrageous actions of the hardware/software system of the Computer Center will be printed as an object lesson for anyone who

Professional News

thinks computers function in a rational fashion. For example, consider the following:

```
From a terminal, a user starts
  some processor about which
  little is known:
```

```
@BLAH
```

Nothing happens, so the user decides this is a "batch" processor which doesn't do anything until the next control card is typed, so types

```
@EOF
```

but just as he starts this, the processor signs on:

```
BLAH VERS 942XYZ 09/32-25:07
```

and garbles the typein so that the first character is not "@" as received by the half-duplex front end. BLAH is a batch processor, and it is equipped with the SIR routines which permit no data input from terminals, so it rejects this input

```
KEYBOARD INPUT NOT ALLOWED;
  USE @ED, OR @ADD FROM DRUM
  FILE
```

and terminates.

This horror story will not win the contest because the user has not really lost anything but his temper, and will probably do better on the second try; the difficulty cannot be easily fixed, since it is tied in to the half-duplex hardware; and, the treatment of the user by the system is not really fiendish.

LAVEEN KANAL presented the paper "Admissible Strategies in a State-space Model for Multistage Multiclass Classification" (with A. V. KULKARNI) at the 4th International Symposium on Information Theory, Ronneky, Sweden, in June. Prof. Kanal also lectured at the University of Southampton, England, and the Medical Informatics Center of the Free University, Amsterdam, Holland, in July. He delivered a paper "Estimation in a Graph Model for Medical Diagnosis" (with J. LEMMER) at the SUMEX-AIM Workshop on Artificial Intelligence at Rutgers University in June.

GEORGE STOCKMAN presented the paper "Interactive Recognition of Reconnaissance Imagery" (with L. Kanal) at the IEEE Workshop on Pattern Recognition and Artificial Intelligence in June, at Hyaanis Port, Mass.

MARVIN ZELKOWITZ has been elected Secretary/Treasurer of the Washington, D.C. chapter of the IEEE Computer Society for 1976-77.

Awards

Victor Basili and Marvin Zelkowitz have been awarded \$54,221 by NASA for "Evaluation of Software Engineering Disciplines." The grant runs from August 1, 1976 to July 31, 1977.

Pete Stewart has received an addition to his grant for "Research in Numerical Analysis," bringing the total from ONR to \$17,884 for September 30, 1975 to December 31, 1976.

John Gannon has been granted \$25,800 by NSF for the period September 1, 1976 to February 28, 1978. The subject is "Data Types and Programming Reliability."

Publications, Etc.

Rosenfeld, A., C. M. Cook, and A. Aronson. Grammatical inference by hillclimbing, Information Sciences 10, 1976, 59-80.

Rosenfeld, A., J. S. Weszka, and C. R. Dyer. A comparative study of texture measures for terrain classification, IEEE Trans. on Systems, Man, and Cybernetics SMC-6, 1976, 569-585.

Rosenfeld, A., and J. S. Weszka. Picture recognition and scene analysis, Computer 9(5), 1976, 28-38.

Rosenfeld, A., and A. N. Shah. Two heads are better than one, Information Sciences 10, 1976, 155-158.

Rosenfeld, A., and E. Luczak. Distance on a hexagonal grid, IEEE Trans. on Computers C-25, 1976, 532-533.

Rosenfeld, A., R. A. Hummel, and S. W. Zucker. Scene labelling by relaxation operations, IEEE Trans. on Systems, Man, and Cybernetics SMC-6, 1976, 420-433.

Rosenfeld, A. Picture processing: 1975, Computer Graphics and Image Processing 5, 1976, 215-237.

PRINTOUT has been trying to print a definitive sequence of those awarded the Ph.D. in Computer Science by this Department (Center, prior to 1973), but has failed several times to get it straight. Trying again:

Fishman, Milgram, Cook, Yeh, Rauscher, Kulkarni, Wilson, McSkimin, Turner, Lemmer, Nagel,...

There are no implications in the final ellipsis.

Congratulations are in order for the following students who passed the Fall, 1976 Comprehensive Examination at the Ph.D. level:

Siegler (#3), Dunsmore (#6), Kirby (#26), Hopp (#32), and Bail (#34)

The numbers are the code names under which these people took the examination, for those accumulating statistics on lucky numbers.

The following is a reconstruction of something that started in D. Mills CMSC 415 class in systems software. The topic under discussion was cache memory, and the problem of invalidating its contents when main memory is altered. It was suggested that the program involved might do the job with a monitor service call, say on the 1100 machines

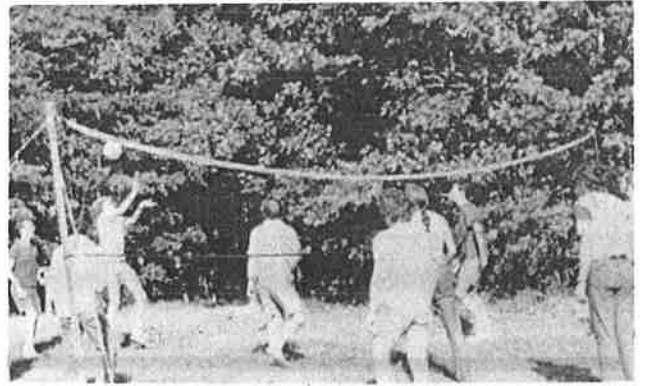
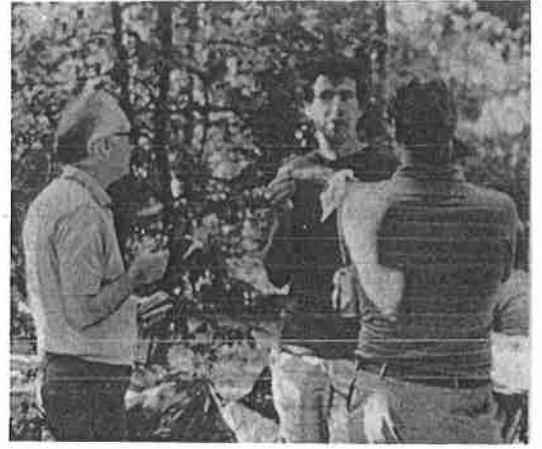
ER STICKUP\$

to empty the cache register. But this implies the existence of other requests to load the cache:

ER BREAKCOINROLLS\$

and to make change:

ER NOSALE\$





P
I
C



N
I
C

- Ashok Agrawala



Carriage Control

(After reading a book-length collection of Finley Peter Dunne at one sitting.)

"I never liked diesels, Katrina."

"Did you know Rudolph, or is it something else?" she said.

"No, he has before my time.

But I do remember the steamers from when I was a boy. Now that's the way to do it, Katrina. Down in the yards at Savanna, Illinois they had steam up all the time (unless one had to be cooled off to scrape the boiler or some such). They'd swing one around on the turntable, point it toward the West, and it was chuff-chuff into the sunset, with the heavy silver plate clattering in the diner, and the politicians waving from the rear observation car. There was an underpass for the Chicago, Milwaukee, St. Paul & Pacific near my elementary school, and the kids would stand up on the bridge over the tracks, waiting for the train to come and engulf them in smoke and steam."

"Diesels pull the trains better and cheaper," said Katrina.

"Maybe so, but something has gone out of it. The CMSt.P&P has a train called The City of Los Angeles, which used to be pulled by a 2-4-4-0 Hiawatha steam engine, and it was a pleasure to stand beside the tracks and watch it pass. But these days they have three diesel switch engines hooked up backwards, and if you stand beside the tracks all you get is a strong whiff of where its going."

"What's got you started on this?" said Katrina.

"It's our new computer power system with its backup diesels. I've got nothing against storage batteries, even if they are full of corrosive acid and give off explosive gases, but I draw the line at

diesel generators. I say let the computer go down for a bit if the power goes off, and run the student assignments a few minutes later. The researchers have to wait hours anyway; they can wait a little longer."

"But how about the people on terminals? They can keep working can't they?" said Katrina.

"Just so they don't need any power to do it. They're not on the diesel."

"Well I think it's an improvement," said Katrina. "Every time the power goes off the computer is down for an hour, even if the power is only off for a minute."

"Most computers don't do that."

"Well, instead of buying a diesel, why didn't they buy a computer that works better?" said Katrina.

"The state won't let them buy another computer, so this was the best they could do."

"You're just mad because they don't pay you very much and they're spending money on a diesel generator," said Katrina.

- Dick Hamlet

An informal seminar devoted to topics in the programming languages area meets weekly, Mondays at 2:30 PM in the third-floor Conference Room. Interested faculty and students are invited to attend. Speaker and topic are posted near the end of the week for the following Monday.

Students interested in the COOP program which combines study with employment, who missed the Information Workshop on October 6, can obtain information from Dianne Martin in the Departmental Office.

classified ads

FOR SALE

IBM 604 computer, \$4. Includes power supply, but not reader/punch unit. Power cord is over 1/2 inch in diameter, and display contains over 200 neon bulbs. No memory, but able to store up to 24 fixed instructions. Purchaser must remove from premises at time of sale (weight 1300 lbs.). Surplus, Annapolis Jct., Md. No telephone inquiries.

Slightly used paper tape. Yellow, unoled. Although some small holes have been punched in this tape, on the average 80% of the surface area is unused. In 10-roll boxes. 555-1212.

ALGOL 68 T-shirts. Back of shirt reads "86 LOGLA". \$5 postpaid, or send shirt and \$3, to A. vW. Enterprises, Math. Cent. Denmark.

CMSC 420 and 440 programs. Latest models, suitable for assignments in Fall, 1976. Originally used in Spring, 1974, and each carries a perfect grade. (For Spring, 1977, order Fall, 1975 models, slightly higher in price.) Call George after midnight.

SERVICES

Wedding invitations, birth and graduation announcements, etc., done inexpensively on beautiful green-and-white striped paper in simple, tasteful block capital lettering. Performations for easy, separation; even holes for hanging! Call Special Forms, YE6-1212.

Computer programs written to order. Latest techniques used with such a heavy hand that no instructor can miss them: top-down, structured programming, step-wise refinement, etc., "You name it, we fake it." Each program contains a sprink-

ling of typical "student" errors, not enough to hurt grade, but sufficient to lend authenticity. Clean compile guaranteed. CONTENT-FREE, INC., UG4-2525.

ROOMMATES

@PLUM seeks compatible processor to share memory. Separate partition, but fixed location cannot be guaranteed. Privacy is much improved since REP glitch repaired, but no refunds if space is violated. Univac processor, and @JACKHORNER need not apply. Write M.V.Z., College Park.

EMPLOYMENT

Reliable systems programmers without EXEC 8 experience. Must be willing to wear call radios and report for duty at all hours. Easy-going working environment where you define your own tasks. Write Box CSC; PRINTOUT, giving references.

Drudges! Immediate openings in growing department of computer science for students at all levels. Undergraduates need no previous experience--will train. Graduates must have approximately four year's apprenticeship, with above-average recommendations. Advanced graduates must in addition place high on competitive examination. Low pay (none) but lots of promises about later. Write Computer Science, Maryland, for full details, enclosing non-refundable fee of \$5 for graduate, \$10 for advanced graduate, to cover the cost of handling.

MISCELLANEOUS

Good-looking, personable young man who spends every evening and all night in

computer center, has no recreational interests, no money, no vices, seeks compatible woman for a serious relationship. Call 454-5201 and leave name.

WANTED

@UNDELETE processor to restore Exec 8 "deleted" elements. Must accept S,R,A, O options. No @FILEDIT, please. Leave note in @NEWS.

- R. Hamlet, P. Zave,
M. Zelkowitz

Attributed to D. Keller:

It is rumored that the Vatican is planning to use extensive software in the task of reconstructing holy relics, and has placed a contract with a well-known European software house for a cross assembler.

ALGOL 60 compiler to Peanuts protagonist: If you're <block head> Charlie Brown, where's your begin <declaration> ?

0103285
0077

MARYLAND

GMMW 138

Born: 2:00 PM, August 31, 1966
Stricken: 4:30 PM, May 9, 1976
Died: 11:47 AM, May 16, 1976

Memorial services were held
on May 17, 1976, at 7:30 PM

CONTRIBUTIONS in lieu of flowers should be sent to the Sierra Club, the
Metropolitan Washington Coalition for Clean Air, or other environmental
group.

- M. V. Zelkowitz