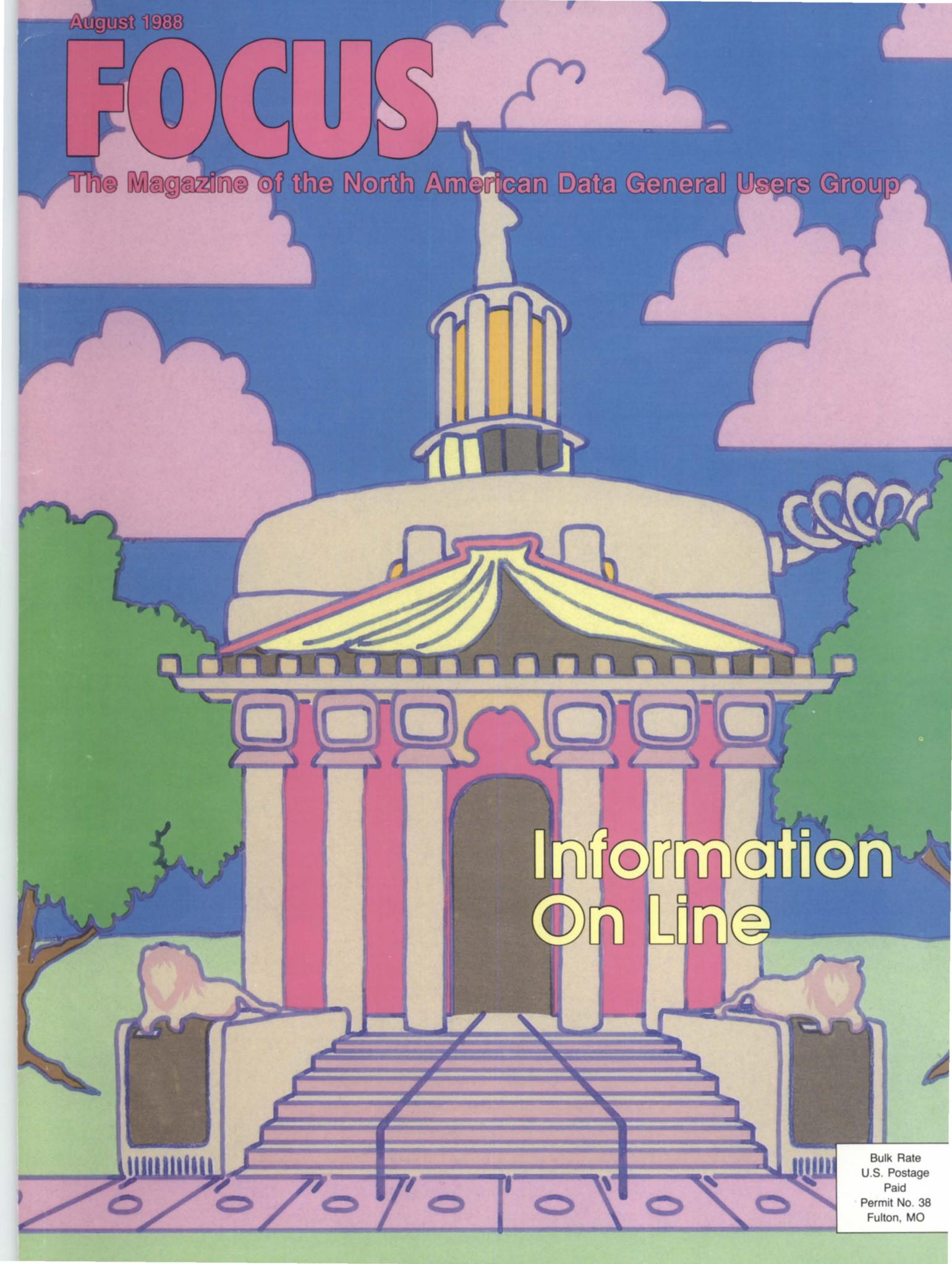


August 1988

FOCUS

The Magazine of the North American Data General Users Group



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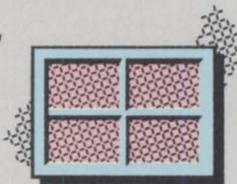
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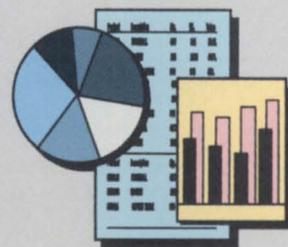
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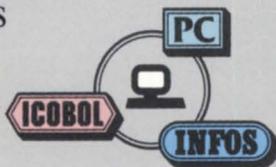
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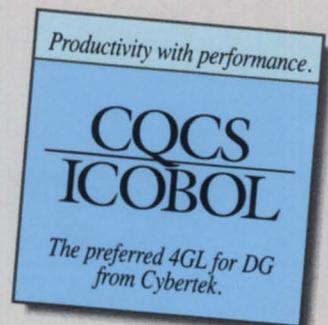
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Summer summits

Warm weather brings warm feelings among many groups

by Joyce Carter
NADGUG president



Summer must be the season for summit meetings. With generally upbeat news coming back from the international summits in Moscow and Toronto, we're expecting more of the same when the

NADGUG leadership holds its annual meeting with Data General's executives.

Each year, NADGUG's leaders go to Westboro for a day of constructive talks with Data General's leaders. For several years now, the subject matter has been determined by the priority concerns identified by a survey of the NADGUG membership. This year, the NADGUG Executive Council, NADGUG president, and vice president will be attending on behalf of the users. If past meetings are any indication, DG will be represented by several senior vice presidents.

I would like to thank the many people who took the time to return our concerns/needs survey. We received 488 completed surveys. These surveys came from all over the United States, Canada, Australia, the United Kingdom, and the Netherlands. This is the best response we have ever had, and I believe the results will provide Data General with a valid picture of users' needs and concerns.

The meetings we have had in the past with the Data General executives have been very productive. The executives have addressed each of the issues we raised,

and followed up with goals and time lines to resolve the issues. (I only wish our leaders in Washington and Moscow could point to a similar record of cooperative achievements.)



Time is getting short. I hope you have made your reservations and sent in your registration for Conference 88, "Where Great Ideas Begin." I look forward to seeing each of you in Philadelphia. Remember, there is an excellent spouse program this year, so bring your family members along. There will be tours and a special room for the spouses to meet in, and of course, they have the opportunity to join in the social functions.

I hope you realize that the term "spouse" is not limited to women. My husband has participated in the spouse program at several conferences, and has always had a good time. There is a lot to see and do in Philadelphia, especially for those of you interested in America's history. Be sure to bring your camera.



On May 23, representatives of several major computer vendor users groups met for the first time. We met to explore the needs, possibilities, and objectives of a "supergroup" that could represent all of the users. Many things were discussed, and we decided it would be worth exploring the concept further. In the end, we agreed to go back to our respective users groups and see what they think our goals and objectives should be.

It was extremely interesting to talk with my counterparts in the other users groups. I learned a lot about users groups at this meeting. We each filled out a questionnaire about our respective groups. These groups put on from one to three conferences per year and have an attendance from 300 to 4,300. Although each group is distinctive, they each share many similarities. The one thing that they all have in common is trying to provide as much interaction, education, and networking with the users as possible.

We will be getting together again, and I will keep you informed of our progress. In the meantime, I would appreciate any comments that you may have about goals for this group. Δ

FOCUS

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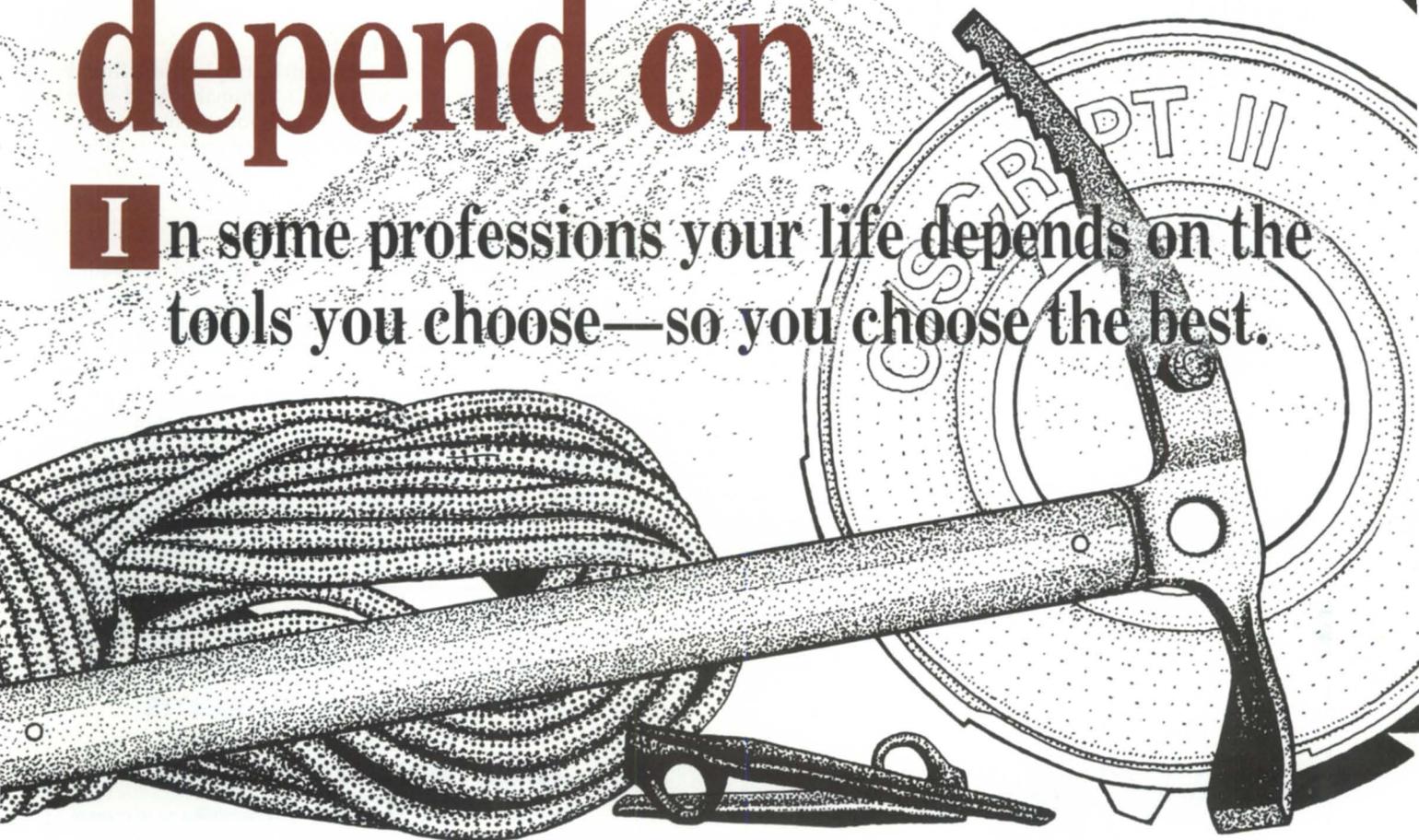
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WEIGHT WATCHERS

Focus tips the scale going into fourth year of production

A few people have asked lately about the extra weight we've been putting on. I'm using the editorial "we" here, because it's *Focus* I'm talking about, rather than myself. (It's possible that I've put on a little extra weight too, but I haven't checked lately.) I don't usually like people to comment on my weight, but in the case of *Focus*, I feel pretty good about those extra pounds.

Perhaps it would be more accurate to say extra pages, but each extra page results in extra pounds of paper to be printed and mailed. This is the 36th issue of *Focus*

since it graduated into its present format in September 1985. That first issue weighed in at 56 pages, counting the covers, and the average for the first year of publication was 60 pages. Gradual growth during our second year brought the average up to 64, and for this past year, it's been weighing in at around 83 pages. Getting ready for our fourth year, we're hoping to see that growth continue with additional ads, features, and columns.

I specifically mentioned ads because all of us should remember that the magazine's growth wouldn't have been possible without a corresponding growth in the number of pages of paid advertising. The *Focus* staff loves to see lots of ads, because it gives us more room for the articles we would have to say no to otherwise. Besides, many of you have told us that one of your reasons for reading the magazine is

to see the ads.

Focus uses a fairly simple rule of thumb: we match every additional page of advertising with an additional editorial page. So if you've been enjoying the thicker issues, thank an advertiser. Let them know you appreciate the support they are showing for NADGUG's activities.

We've been getting used to gradual growth during the past three years, but something strange happened in the first half of 1988. Usually the beginning of the year is slow—advertisers are still working on their budgets, and many of them aren't around during the holidays to approve ad decisions. But January and February of 1988 didn't lose much weight this year. And then came May and June, bringing our second- and third-highest page counts ever. Even July, which usually sheds a few

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summer pounds, was a pleasant surprise. Though very welcome, the extra pages caught us unaware, and in fact were the occasion for a lot of self-examination. Was it something we said? Can we take any credit for it, or does it reflect an underlying strength in the overall computer market? Maybe it's due to a resilience in the DG market that hasn't shown up yet in Data General's stock price? Or could it

really be a sign that *Focus* and NADGUG have gained wider recognition in the DG community?

Perhaps you have another theory. If so, how about giving me a call or writing a letter to tell us what you think?

I just returned from a meeting of SNAP, the Society of National Association Publications. Perhaps you've noticed their logo

on our table of contents. On a smaller scale, the SNAP meeting was much like our NADGUG conferences—a chance for peers from many different settings to get together, compare notes, recharge their batteries, and get fresh ideas.

One of the speakers, a founding editor of *Omni* magazine, had come to talk about "Magazines of the Future." He smiled when he took the podium, and said he was embarrassed to say it, but he thought magazines of the future would be pretty much like the ones the people in the audience were already putting out. He explained that small-circulation publications for special audiences would thrive, while mass-circulation magazines would founder. In support of this view, he said that since 1974 there have been only a handful of successful magazines with circulations of more than 500,000 (*Inc.*, *Self*, *Working Woman*, and *Omni*, to name a few). Even these few successes point to the truth of his observation: they are comparatively small, and serve a well-defined audience with special needs and interests.

NADGUG and *Focus* are good examples of the narrowcasting (as opposed to broadcasting) approach our speaker was advocating: a specialized audience with special needs that can't be served by a more general publication. To succeed in meeting the needs of a specialized audience, the speaker continued, you have to forget about trying to please the 4,499,500,000 people who aren't in the club. Go ahead: use technical language, be arcane, preach to the choir. The surest way to fail to serve your audience is to try to dilute and broaden your coverage to appeal to people who probably couldn't care less anyway.

That was reassuring. *Focus* has done well by concentrating on providing technical information for a very select group of people. That has often worried me though. Shouldn't we be trying to broaden our appeal? The speaker from *Omni* made a strong case for the opposite point of view. Again, if you have a theory of your own, I'd love to hear from you.

Another speaker, on the occasion of receiving an award for editorial excellence, was asked to describe his formula for success. He put it simply and elegantly: 1) reverse your readers, 2) get good people, and 3) make them do your work. That's advice I think I've learned how to implement—especially the last two points.

Just this once, as *Focus* prepares for its fourth year, I'd like to give credit where it's due. Take a look at the staff box for a long list of people who do most of the work. —G.F. △

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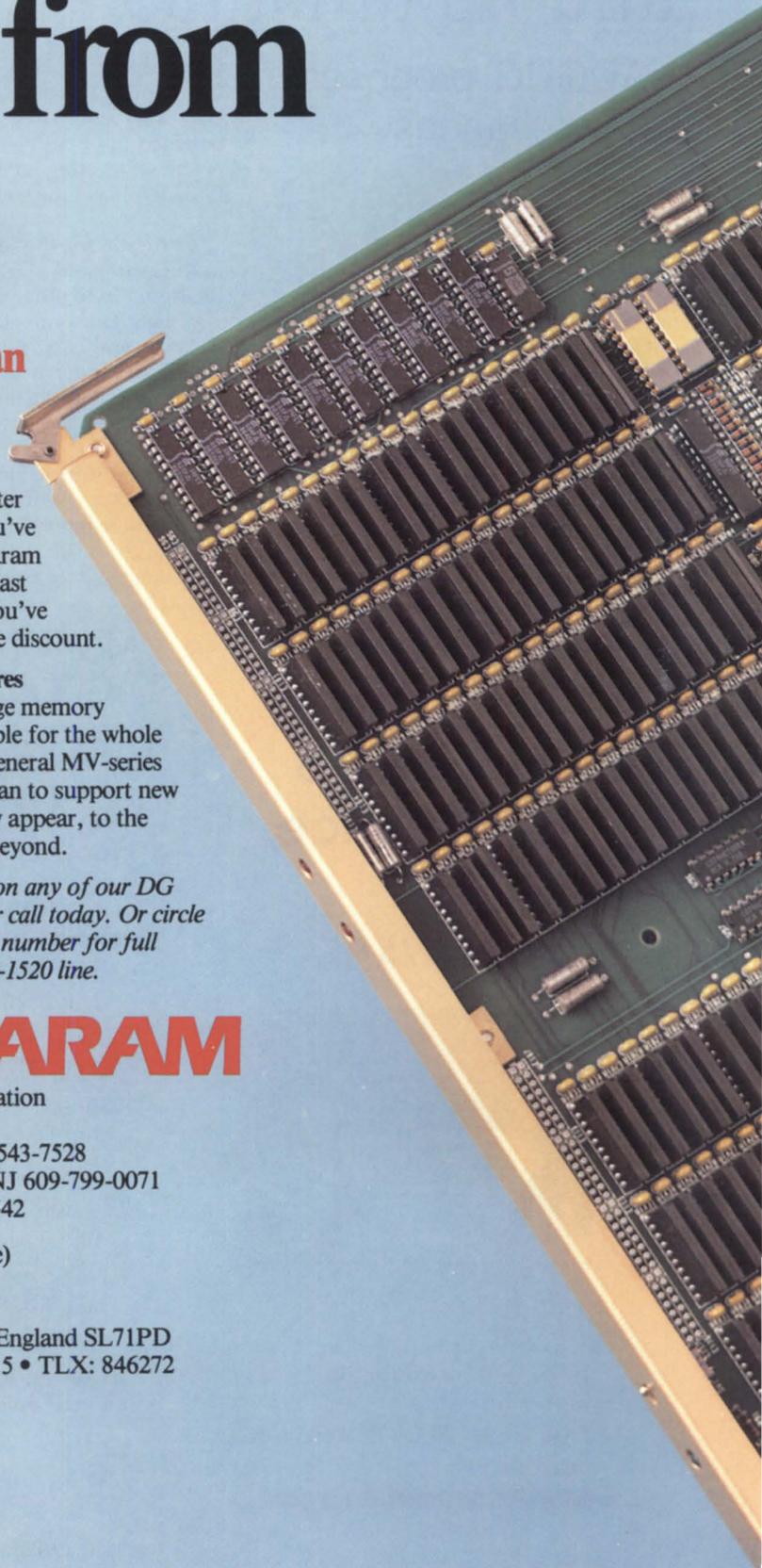
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News from NADGUG and its affiliates

NADGUG proposes bylaw changes

by Joyce Carter
NADGUG president

As required by NADGUG bylaws, notice of proposed bylaw changes must be published to the membership 90 days prior to the general business meeting.

The proposed changes are summarized here. The actual wording changes will be available at the conference. I am summarizing the changes to try to convey the meaning and reasons for the changes, rather than listing both the current wording and proposed wording.

The Executive Board and the Executive

Committee of NADGUG recommend that the following changes be made to NADGUG's bylaws. These amendments will be voted upon at the NADGUG general business meeting at the conference in Philadelphia at the end of August 1988.

1. Provide for the legal incorporation of the group and clarify its purpose and relationship to other groups.

- Change the name to North American Data General Users Group, Inc.

- Remove reference to standards and specifications from the purposes of the organization to reflect the limited scope of the group.

- Change "Restrictions of SIGs" to "Conditions of Recognition" and delete the requirement to report monies collected and spent to the NADGUG Executive Board.

- Change "Dissolution of Special Inter-

est Groups" to "Withdrawal of Recognition of Special Interest Groups" and delete reference to existing funds.

- Specify that all references to DG include DG (Canada).

- Specify that membership may be terminated for conduct that the board feels is not in the best interest of NADGUG.

The Executive Board wishes to have NADGUG incorporate. Due to the size of the group, liability considerations, and many other factors, this move has become necessary. The points above relate to filing requirements and other legalities, and they have been well researched. The changes to the relationships with RIGs and SIGs are being recommended to recognize that each group is entirely independent.

2. Make all necessary changes to have only one class of membership. The Ex-

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Executive Board feels that there is no benefit of having two classes of membership. This change would make one type of membership, allowing everyone except Data General members to vote.

3. Add a paragraph under Executive Board to define the Executive Committee (to include elected officers). The reason for this change is so NADGUG busi-

ness can be conducted between the semi-annual meetings of the Executive Board. The Executive Committee had not been defined as distinct from the Executive Board.

4. Specify that all past presidents of NADGUG are members of the Executive Board. The Executive Committee feels that NADGUG would benefit from the experi-

ence and knowledge of past presidents.

5. Require anyone handling NADGUG funds to be bonded. This would protect NADGUG's funds.

6. Allow travel done for NADGUG business and budgeted for by the Executive Board to be paid for by NADGUG without special board approval. These items are approved for in the annual budget, and the Executive Committee feels that special restrictions are not required.

7. Change the requirements for advance notice of proposed bylaw changes from three months to one month, and allow for emergency amendments to be passed by the Executive Board if ratified by the general membership. The current requirement for three months advance notice makes it impossible to have these amendments published in *Focus* because of the lead time, which would require submission before the spring Executive Board meeting where such recommendations usually originate. The emergency amendment will allow the Executive Board to pass an amendment at the spring board meeting without waiting another six months for the general business meeting.

8. Add an article to allow for liberal interpretation of the bylaws so that the Executive Board can effectively carry out the objectives of NADGUG.

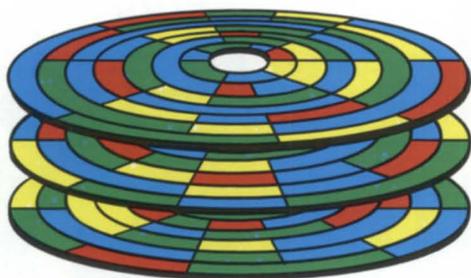
9. Add an article about indemnification. This would specify that no single person(s) would be held financially liable for NADGUG debts.

10. Change requirement of the treasurer to report expenditures to the membership within two months of occurrence. This was not a reasonable requirement. Δ

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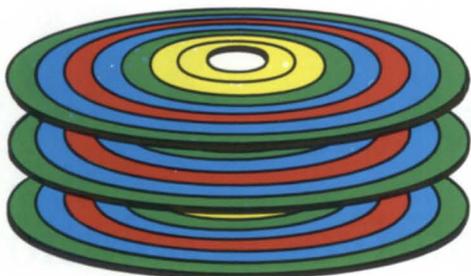


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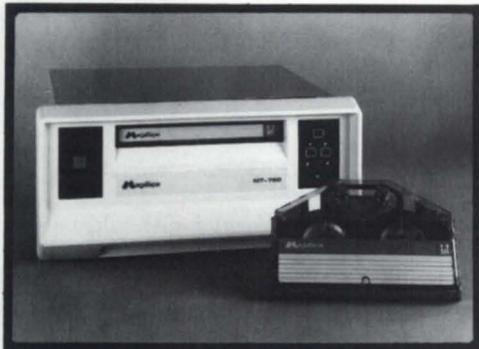
OASIS goes to D.C.

by Bobbie Pressman
OASIS president

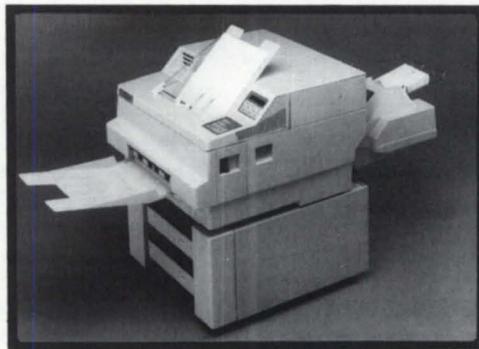
The eighth OASIS workshop was held May 19 and 20 in Washington D.C. The two-day workshop was hosted by the FedSIG with OASIS secretary Tara Bowman of the National Soft Drink Association coordinating the event. The local Data

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General office supplied the workshop with the hardware and software, and Graphnet sponsored a nice cocktail reception Thursday night.

Charlene Kirian, OASIS education director, and I welcomed the group before the workshop got under way. Thursday's sessions included the following.

- Arch Hughes of DG led a session on CEO rev 3.0 system management issues, which included a thorough review of how the new revision of CEO will affect those of us who manage and maintain CEO systems. An interactive session used the collective testing experience of the group to formulate a comprehensive testing checklist that could be used when upgrading revisions of CEO Office/Publisher (a publishing package integrated with CEO). Charlene Kirian demonstrated the file transfer capabilities of CEO Connection, including setting up the dial-in and sign-off sequences that it uses to affect the PC-to-mainframe connection.

- Doug Tomlinson, CEO support manager out of the Atlanta Customer Support Center, opened the floor to questions, which ranged from "How can we get a list

of known problems after a new release is received?" to "How long will the Support Center support CEO rev 2.2X for those who can't rev up quickly?" He also told the attendees that those customers with DG contracts should notify Atlanta when they plan on upgrading to CEO 3.XX during a weekend, so he can plan staff coverage.

Friday's sessions included a CEO Product Development Roundtable headed by Skip Richards, Mike Cromer, and Lou Frio of Data General. A separate interactive session on users' problems and concerns was scheduled; however, since the two sessions meshed so well, we continued the roundtable discussion until the afternoon.

The day ended with the regular open forum, wrap-up discussion. This time is allotted at the end of every OASIS workshop for attendees to ask questions, describe problems, offer solutions, and offer constructive suggestions to OASIS, Data General, and other vendors in attendance.

Comments were positive from the attendees. One person said, "This was my first OASIS (workshop), and I got 'a lot of

bang for my buck.' Lots of useful information."

Another person said, "It allowed me to gather information that I would not have been able to get from my sales office."

We are already beginning to plan for the next OASIS workshop to be held August 29 at the NADGUG conference in Philadelphia. Watch your mail and *Focus* for further details. △

RIGs and SIGs get special attention at conference

by Cathlene Gentry
RIG/SIG coordinator

Everyone should be getting ready for the NADGUG conference in Philadelphia, August 29 through September 1. Besides the activities designed for NADGUG members, the RIGs and SIGs have orga-

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nized several programs this year that will enable them to meet and share ideas. Sunday, August 28, the RIG/SIG chairpersons will attend the Executive Board meeting. Here, all leaders will give a status report on their groups. A lunch meeting for the chairpersons is scheduled for Tuesday from 11:30 a.m. to 1:00 p.m. This meeting will enable the group leaders to share ideas and learn from each other. Tuesday and Wednesday nights have time set aside for SIG meetings. To find out the time of your SIG's meeting or one that you would like to attend, just check page 71 for the complete conference agenda.

Besides the formal meeting opportunities, the RIG/SIG Committee will have its own stand in the NADGUG booth. A RIG/SIG Committee member will be on hand at all times to help or to answer any questions about RIGs and SIGs you may have. If you are a member of a regional or special interest group, are interested in joining an existing group, or want to start a new one, come by the NADGUG booth and talk with me or a member of the RIG/SIG Committee. I am looking forward to meeting everyone and working together to

strengthen the RIG/SIG program. See you in Philadelphia! Δ

INFOS SIG to hold reorganizational meeting

The INFOS SIG will use the occasion of the NADGUG conference to reorganize and recruit volunteers interested in helping to activate the group. Officers will be elected and members will be asked for ideas concerning group activities and the possibility of printing a newsletter.

The meeting will end with an informal discussion on any technical subjects attendees may be interested in talking about.

The meeting will be held on Wednesday, August 30, from 4:45 p.m. to 5:45 p.m. in Salon 9. Members and anyone interested in joining the group are encouraged to attend. For more information, contact Tom Duell at Eagle Software, P.O. Box 16, Salina, Kansas 67402-0016; 913/823-7257. Δ

PA-DEL-NJ RIG forms

In response to increasing interest from DG users, the Philadelphia, Delaware, and New Jersey area is forming a new regional interest group. Organizers have mailed more than 300 questionnaires to individuals in the area. The first organizational meeting will be held the first week of August. The selection of first-year officers will be held at the NADGUG conference on Monday, August 29, at 4:30 p.m. Interested individuals are encouraged to attend. Anyone with questions should contact Lee Locke at The Philadelphia Corporation for Aging, 111 N. Broad Street, Philadelphia, Pennsylvania 19107, or call her at 215/496-028. Δ

ICOBOL SIG shows interactivity

Conference Tuesday is an important day for ICOBOL users. First, there will be an

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SECURE YOUR ENVIRONMENT WITH menuOP

Jan 28, 1988	Main Menu	5:56:29 PM
0)...about menuOP (tutorial)		
1) CEO (Data General's CEO)		
2) Library (WordPerfect's Shell)		
3) File Crypt (data encryption)		
4) Pipeline (async mail delivery)		
		Option Id: 0
(F11=Exit/Cancel) (SF1=Help)		

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ICOBOL Roundtable discussion from 2:00 p.m. to 2:45 p.m. SIG leader Dennis Doyle of Bankmatic Systems will chair the session. At 3:00 p.m., an ICOBOL demonstration called "ICOBOL in the Age of Micros" will be given by Gerry Manning of Gerry Manning and Associates. At 5:00 p.m., the ICOBOL SIG will hold its conference meeting. Anyone interested is encouraged to attend. For more information on any ICOBOL happenings or the ICOBOL SIG, contact Dennis Doyle, Bankmatic Systems, 12655 Southwest Center, Suite 230, Beaverton, Oregon 97005; 503/643-2446. Δ

NADGUG president speaks at Mid-Plains (MPUG) meeting

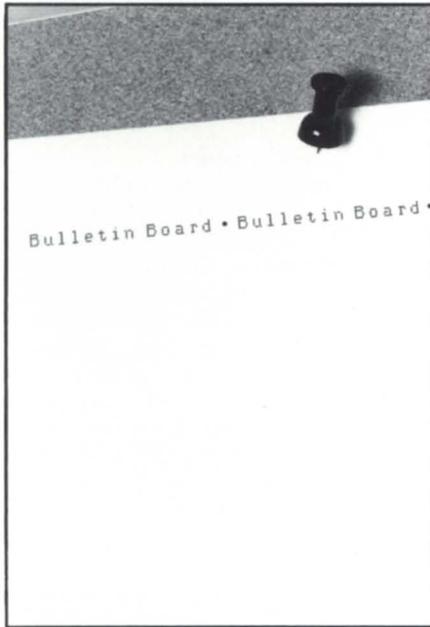
NADGUG's president Joyce Carter attended the May MPUG meeting, bringing with her a trivia quiz and an update on the national organization. Brian Seiffert and Jim Sweene, both of Data General, gave new product announcements about hardware and software that were so informative MPUG president Chuck Paige had to take three pages of notes! A representative from Kansas was also present and gave a presentation.

The July meeting will take place at Offutt Air Force Base. The Executive Board of MPUG has been busy planning meeting topics and getting speakers for upcoming meetings. All they need now is for more members to come out and take advantage of all that these programs have to offer. The next meeting is September 21. If you have any questions about membership to MPUG or suggestions for the Executive Board, contact Chuck Paige at Sarpy County Courthouse, 1210 Goldengate Drive, Papillion, Nebraska 68046; 402/593-2325. Δ

Group needs leader

The TEO 3-D special interest group is temporarily out of a leader. Unfortunately, Ken Libby had to give up his post as contact person for the group. Fred Fondriest at Data General has been helping but would like to see a DG user take control. If any person is interested in helping the group stay alive, contact Fred at Data General, 3400 Computer Drive, MS 952, Westboro, Massachusetts 01581, 508/898-4142 or call Cathlene Gentry, 512/345-5316. Δ

Bits and bytes from the bulletin board



From: Sharron King

Under AOS/VS 7.60, a problem has shown up on non-DG terminals coming into our IAC-8's through a DCA multiplexor. When a user logs off, that line hangs during the log-off messages. At the system console, EXEC gives the message "@CONxx: Modem disconnect in progress cannot open" followed by "Console disabled, @CONxx." If a "CX ENABLE @CONxx" is attempted, the terminal at which it is attempted hangs until a ^C^A aborts the command. It was discovered that CLEARDEVICE/RXON @CONxx frees the line and allows the console to be enabled. The problem happens less frequently at higher baud rates, so it may be a timing error. The problem is apparently in :IACRS, since it went away when the 7.60 versions of :IACRS.<PR,ST> were replaced with the 7.57 versions.

From: Sharron King

If anyone is interested in the undocumented system call ?CRYPT, Mark Robinson has written a description that is available for the asking. Address: ORNL, Bldg. 3025, P.O. Box 2008, Oak Ridge, Tennessee 37831-6032. Phone: 615/574-5791. Bitnet: MTR@ORNLSTC.

From: Sharron King

Warning! Rev 6.00 microcode for the MV/10000 has a serious error. If an operation is performed that produces a result smaller than the smallest real value allowed, rather than setting the result to zero, the result is not stored. For example, $c=a*b$; if $a*b$ is less than $5.4E-79$, c retains the value it had before the operation. Restoring rev 5.01 microcode corrected the problem.

From: Mike Shumway

Does anyone have or know of a "watchdog" program that will time out a user after a long period of inactivity? Ideally, it would use minimum system resources and allow manager-defined time limits. Any ideas would be appreciated. Thanks.

(See page 50 of Jim Siegman's column in the July 1988 issue of Focus for one suggestion.—ed.)

From: Mike Shumway

We received our rev 3.00 CEO tape and new manuals. From our experience, we are waiting for the 3.01 tape to arrive. There are a number of problems that are fixed in 3.01, including smaller WSS for users, printing wide docs, and some more specific problems. Word from Westboro is that they are aware that the performance is less than ideal, and most everyone isn't really excited about the increased memory requirements, and they are focusing on that for improvements. I hope that's true. Anyway, with an MV/8000 model II on 3.00 (a real speed demon) and an MV/4000 DC on 3.01 beta, I'm almost ready to go with the 3.01 released product when it gets here. Word was that 3.01 was signed off last week. (I'm not sure whether that really happened.)

From: Stan Gula

We are probably going to wait for at least 3.02. We have 3.00 up and running, and a couple of bugs we've found are supposedly "fixed in 3.02."

From: Mike Shumway

I always like to wait until the support people aren't talking about a new release *before* you get the tape to the previous release. I don't like it when they talk about 3.02 before the 3.00 tape arrives. Stan, have you had any serious problems with the NSA network? That is the only thing we haven't tested. We only have it up on one "live" system.

From: Mike Shumway

I am sure that we have all been over this

before, but does anyone want to recommend a CEO accounting package for the purpose of charging back the users for disk utilization and CPU utilization? Running full syslogs and manipulating that data is not a feasible solution (it's a pain in the neck). We have only CEO users so that is the only application we need to monitor. It's unique in that the servers do most of the work, which makes it all the more difficult. If anyone has any suggestions, please let me know. Thanks a lot.

From: Jeff Campbell

Call DMS Systems and ask for Resource Accounting System software. I have been using it for almost two years, and it works very well. With the newest release, I can even write custom reports. I am mostly a CEO shop as well, and the software has worked well for me.

From: Tom Doyle

I'm looking for a version of the Softrans protocol (the send/receive protocol for Softerm PC and Softerm 2) that will run in RDOS on a Nova 4X. I've seen the AOS version, but I can't find an RDOS. Alternately, a quick-and-dirty version of Xmodem for RDOS would be handy. I know about Breakthrough, but I can't afford \$500. Any help would be much appreciated.

From: Tim Boyer

Good luck. I've been looking since 1986. Surely there's still a hacker out there who could do a quick Xmodem! Is Breakthrough really \$500? Last time I checked, it was \$195.

From: Tom Scheiderich

I was looking into modifying the AOS program for Softrans, but don't really want to deal with the 7-bit problem that Softrans deals with. Also, the characters are compressed. I will probably look into it later. I am presently writing an <X,Y,Z>MODEM program for transferring data from my Desktop to an S/140 in New York. The Xmodem protocol is fairly trivial. It's the other versions that get more complicated. I figure a working version will be done in the next two to three weeks. I am presently sending data back and forth from my two Macs and a CPM bulletin board. It is written in Fortran IV on the DG machines, Pascal on the Mac, and there will also be a Fortran 77 version on the Mac.

From: Tom Doyle

Yes, it's \$495. I called them, because I saw an old advertisement at \$195 and

wanted to place an order. Since my entire annual budget is \$500 (mostly paper and ribbons), the \$495 was a little out of my range.

From: Ron Ralston

I've uploaded information on Data General product (and other) announcements for the period from the end of April through last week. This includes informa-

tion on the DG/500, add-on external disks for the MV/2000 and MV/1400, higher user counts for the MV/2000, and other things of interest to DG users.

From: Douglas Caviness

Yes, there are DG/UX users. I am the system manager for a setup that includes an MV/7800 running AOS/VS and an MV/20000 running DG/UX. Using DG/

UX can be real interesting at times.

From: Glenn Diehl

Glad to hear there's somebody out there. Did you by any chance see my earlier message about disk I/O? I'm sys admin for an MV/8000 II, 8 MB, floating-point unit, three 354 MB drives, running Ethernet (TCP/IP and NFS). The problem is that disk I/O is really bad. Sar-b shows no buffer cache hits at all. Have you run into a similar problem? Thanks for any help. If I can be of any assistance, let me know.

From: Michael Meissner

I don't believe the code to run UUCP over TCP/IP is compiled in. I wrote a set of utilities to pick up the UUCP spool files on an MV/UX system and to send them to a remote site via Xodiac. I added a section to send them over sendmail but never wrote the companion piece to unpack them. In any case, I didn't expand them, because it was kind of a chicken-and-egg problem. The main use I have for UUCP is for mail, so it seemed kind of absurd to encode UUCP mail messages and send them via TCP/IP.

From: Steve Brenner

Has anyone seen any conferencing or bulletin board software for the Data General?

From: David Down

I might be writing a DG BBS system later this year if management approves it. Will let you know if it materializes.

From: Tim Boyer

We just put the order in for an MV/8000. Between maintenance, conversion, and retraining costs, we blew the IBM 38 out of the water. Now for the next question. What essential pieces of software should every new VS user get? I need to do this quickly, before my company can start paring down my wish list. If I say that we need an odd-parity muffler bearing to run VS, they'll buy it. If I wait two months, they'll say "Well, we've been running just fine without an odd-parity muffler bearing so far. Put it in next year's budget." So far, I've purchased PERFMGR (and surprised the heck out of B.J., who said, "You're getting this *before* you get your machine?"), and I'm planning on getting DBR. Anything else on all of your lists of essentials?

From: Doug Rady

Might want to check out Disk_Pak from Eagle Software. Another must is Dave Down's TEX. Was going to suggest DBR, but you've already got that down. Same

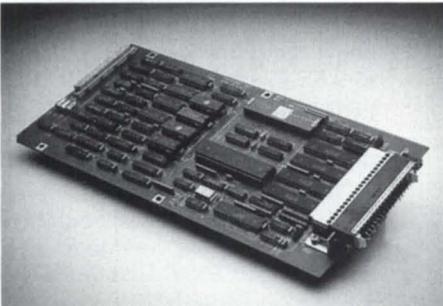
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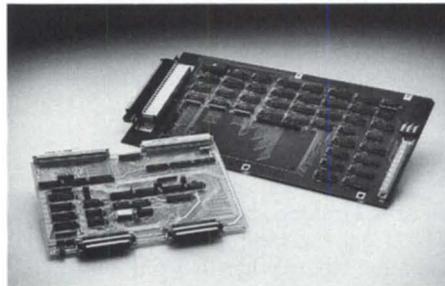
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for PERFMGR. SPSA might be nice; we're running without it, and going through our VAR or sponging time off the local office is a hassle. Hooray for another blue boat sunk!

From: Tim Boyer

TEX is shareware on the NADGUG library tape, right? I'm going to order one of those suckers as soon as my machine gets in. Get a copy ready, Randy. . . . Another question for those ICOBOL users out there who are familiar with RDOS ICOBOL. I've been asked if I want to buy the PASS queue for AOS. My immediate reaction is of course I want PASS, which leads me to the conclusion that I might not want it; otherwise, it wouldn't be an option. Any coherent reason why I wouldn't need PASS?

From: Doug Kaye

Who can tell us what UART chip is used in the DG/One? How is it different from that used in a PC or standard clone?

From: Randy Berndt

The original DG/One used a (CMOS?) 8250, and the IBM uses an 8251. (Or reverse, but I think I'm right the first time.) Later DG/One's can accept an add-on card that is 100 percent IBM compatible (has other chip on it).

From: Stan Gula

The original DG/One used an 82C51 instead of an 8250 family. (ATs use 16450s, the 16-bit version that's compatible and faster.) The original docs that came with the DG/One had source for an interrupt-driven driver for that chip. We never bothered to implement it, and neither did most of the software houses selling PC comm packages. That's why there were so few comm programs for it (I think Crosstalk and DG/Term were the only ones). The DG MS-DOS programmer's reference model 069-100028 revision 01 July 1984 has the driver in appendix E. I could probably send you a copy if you're interested. As far as I know, the "IBM-compatible" asynch port is now standard in the DG/One model II, but we don't use them any more, so I'm just guessing. I've had requests to support that chip, but it's not worth it. I would rather use a packaged driver (Greenleaf, for example, costs only \$125 or so) and not waste the development time. It's interesting that Greenleaf's manual specifically states that they do not support the 8251.

From: Eric Birch

Does anyone know of an editor for micros that is identical to or similar to

SED? If you do, I would appreciate knowing the cost and where I can get it. Thanks.

From: Stan Gula

You want an editor like SED? Yuck. Almost any PC editor is better than SED. One you should look at is Brief from Solution Systems. (Any old PC software vendor can get you a copy. They have a 30-day free-look policy too.) You can reconfigure

the hell out of Brief and make its keyboard and screen handling look like almost any editor you like. However, I've been using it for about a year, and I'd rather make SED more like Brief. . . . In fact, I now do all my editing on my PC and upload. All my originals (macros and source code) are on my PC. The only time I use an MV editor is when I need SPEED to go in and whack a few characters. Δ

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SOFTWARE LIBRARY INDEX

A complete listing of the NADGUG software library

NADGUG librarian Randy Berndt is now able to make the software library available to users of MV/2000 systems. Previously, MV/2000 tapes couldn't be serviced, but Kevin Danzig of the Danzig Corporation in Northvale, New Jersey, has volunteered to handle the conversions. All NADGUG members interested in receiving the NADGUG software collection, including those using MV/2000 systems, should send a 1,200-foot tape to:

Randy Berndt
American Urological Association
6750 West Loop South, #900
Bellaire, Texas 77401
or call 713/665-7500. Software contributions should be sent to the same address.

Please include a self-addressed return envelope with sufficient return postage. In compliance with postal regulations, do not date the postage, because the tape will not be returned to you on that date. If you send it at the end of the month, please have the postage read for the following month.

DBCHECK

This program checks the open status of an INFOS file and examines the check-pointing status of a file. Uses 230 blocks.

DUMpload

DUMpload is a Macintosh program to dump and load AOS/VS-compatible dumps on a Macintosh. Uses 140 blocks.

FILEMNGR

You can move, copy, delete, view, and perform several other options. This is distributed as shareware. If you try it and continue to use it, you are requested to pay a registration fee. From Kim Geiger. Uses 459 blocks.

FTNCVT

This is a Fortran 5 to Fortran 77 translator. Uses 287 blocks.

Games

Games is a collection from various places. Enjoy. Uses 19,293 blocks.

Glossary

Glossary is a program from John Grant that builds a list of words used in a document and shows where they are used. Uses 416 blocks.

IMSLUTIL

This is a collection of CLI macros, CO-

BOL routines, and assembly routines callable from COBOL. By IMSL of Houston. Uses 6,154 blocks.

JAG_UTIL

JAG_UTIL consists of several programs: Filecount, Userspace, Scan, and Laminate. John Grant has reserved some rights on his stuff, so check the documentation for specifics. Uses 1,501 blocks.

Kermit

Kermit is a file transfer protocol developed at Columbia University. Uses 9,328 blocks.

Look

Look is used to view text files. It allows you to move forward and backward in a file. This program was donated by Data General. Uses 438 blocks.

Macbook

Macbook is a collection of macros from the Colorado users group. Uses 342 blocks.

MENUDIR

This is an initial user menu that can chain to other applications. It features a password control system. From the Fed SIG. Uses 492 blocks.

Misc Kerm

An expanded version of AOS Kerm, this now includes other versions of Kermit including DG/One Kermit. Now uses 6,298 blocks.

QHelp

QHelp is a tree-structured help facility. Uses 2,277 blocks.

SKLSCRN

This is the COBOL standard entry screen featured in George Burns's article that appeared in the April 1988 issue of *Focus*. Uses 385 blocks.

SWITCHES

SWITCHES is the GET.SWITCHES routine from John Grant. Uses 1,297 blocks.

TEX

TEX (Terminal Emulator with XMODEM) is a terminal emulation program written by David Down. He has recently revised the TEX software to include a command language. TEX is being distributed as shareware. Uses 495 blocks.

VT100KER

VT100KER is the VT100 emulator from John Grant. Uses 1,135 blocks.

Xfer

Xfer is a tape conversion utility. Δ

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Pilgrim's Progress

Site-seeing in and around London

by Greg Farman
Focus staff

At times during the past year or two, good news was hard to find at Data General. But even when DG was closing plants and racking up record losses, there were notable bright spots in the European market, particularly in the United Kingdom.

DG's European operations have grown steadily despite the problems the company has had to deal with in North America. Europe was responsible for 30 percent of DG's worldwide revenues last year, up from 20 percent in 1985. More than 30 percent of the European revenues came from the U.K., and business in the U.K. has been growing at an annual rate of about 25 percent.

Other computer vendors have not matched DG's growth in Europe, and the reason seems to be aggressive management for DG's European operations. In the U.K., for example, DG is mounting an effective challenge against the dominance of DEC, IBM, and Prime in the government and education markets.

One London-based DG sales rep spoke with good-natured gusto about the opportunities he now gets to go head-to-head with DEC, his former employer. "They crumble when they have to commit resources" he said. "They're poorly organized and rarely make the deadlines" for responding to an Intent to Purchase notice from a government agency. By concentrating on the customer's needs and putting together a superior proposal, DG won a significant victory earlier this spring in a competition that included IBM, Wang, DEC, and Honeywell. The London borough of Southwark signed a \$1.8 million contract for an office automation system

that includes MV/2000s, MV/7800s, PC*I, and 74 Dasher/286s. Moreover, DG gained a five-year commitment as the borough's sole office automation supplier.

DG sales reps and systems engineers also work very closely with independent software vendors to put together solutions for prospective customers. For example, it's not at all unusual for a systems engineer in the London office to use a 4GL like Cybertek or Powerhouse to produce a prototype of the prospect's application.

European businesses moved ahead steadily—erasing much of the lead North Americans had come to consider part of the natural order of things

But that's not the whole story. Part of the growth in Europe is due to prevailing business conditions and attitudes there. Despite the generally higher prices they pay for both hardware and software, Europeans have been moving ahead steadily to build on the productivity gains they made in the first wave of computerization. The downturn that many computer companies suffered during the last few years was a case of saturation: businesses in North America had to pause and digest the systems they had been rushing to install. Meanwhile, European businesses

moved ahead steadily—erasing much of the lead North Americans had come to consider part of the natural order of things.

While visiting the U.K. Data General Users Group last March, I realized that the attitudes I encountered in DG's sales offices were mirrored in hundreds of companies that are making steady investments to keep their computer systems near the leading edge. Here are two of them.

Digital Pictures

Circles twist through space, then link to form the five-ringed Olympic logo. Day breaks as the earth rotates eastward and transforms itself into a spheroid network news symbol. Improbable fish swim even more improbably through freestanding, containerless columns of water. A battalion of spoons wages a full-scale assault on an unsuspecting yogurt-filled refrigerator.

These impossible images are the stock-in-trade of Digital Pictures, a computer animation company based in London. Originally established at the Slade School of Art by lecturer Chris Briscoe, the company now accounts for perhaps 60 percent of the market for computer graphics in the U.K.

Briscoe, formerly a sculptor, saw early on that computer graphics could provide a powerful new artistic tool, and that the process of computing an image was both a technical and an aesthetic challenge. The appeal in the early days was mostly self-expression. It wasn't until later that his fledgling company became a commercial success.

The first break came when the advertising agency for Michelin was looking for something new and different to help advertise tires. They came to Briscoe, and the resulting television spot started a steady stream of major clients coming to Digital Pictures' door.

It wasn't an easy door to find. Located in an artsy district of London replete with down-at-the-heels buildings and narrow streets, Digital Pictures was still moving

into its new offices when I visited. A crane had been required to lift the company's MV/10000 and MV/15000 model 20 out of the old office and into the new.

I found a staff of 14, all of them "creative," and not one of them wearing a suit. The company's philosophy has been to hire people for their artistic abilities, and then teach them what they need to know about the technology. Recently, they've been trying to form partnerships with educational institutions to get a source of computer-literate artists. However, since Data General doesn't have a strong presence in the U.K. academic market, it has been hard to find schools with an MV on which to run Digital Pictures' software.

Giles Parker, the director responsible for the hardware side of the business, explained how Digital Pictures works. In the early days, designing computer graphics was painstaking work; the company was writing Fortran programs from scratch to run on a Nova 3. That early software has now grown into a suite of programs written in C and running under DG/UX. An artist uses a D411 to call the programs, and a graphics screen displays the results as the MV does the number crunching. When a frame is completed, it is dumped to a high-resolution frame buffer, from which it can be recorded either to videotape or directly to 35-mm film.

The calculations involved in producing a single frame can be mind-boggling. Take the frog, for example. Start with a two foot tall wooden model, and painstakingly record hundreds of three-dimensional points on its surface to define the contours. Then run special programs to give the surface realistic mottling, reflections, and shading. Finally, you're ready for animation: another set of programs will represent how the surface will deform as the creature takes a small hop forward and inflates its throat pouch.

It's not unusual for it to take an hour of CPU time to compute each frame, and animation requires 25 frames per second. With deadlines often tight, Parker frequently finds himself strapped for computer power. "There is never enough machine power, but that is the nature of the business. Even if we had two Cray supercomputers, we would still be able to use them 24 hours a day."

Keeping a good working relationship with the London DG office has helped. They have been known to loan out memory boards on occasion, and during one very tight deadline for a BBC documentary, Digital Pictures was tapping into computers as far away as DG's Paris office to get the extra CPU time it needed.

Parker admits that the computer animation with which we are most familiar—abstract solid shapes moving through space—is becoming a cliché. He believes that the trend will be to produce more realistic computer graphics. For example, real objects move in accordance with the laws of physics, rather than the artists' whim. That will require many additional program modules. Existing programs will

have to be refined to make shading, reflection, and motion more realistic. The ultimate goal, he said, is to reproduce a complicated social setting—the interior of a restaurant, for example—with so much realistic detail that you couldn't tell it from the real thing.

Coopers Animal Health

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Berkhamsted, sits the manor house of the Coopers family. Unless you look closely at the flag fluttering over the roof, you wouldn't guess that this is headquarters for a company doing more than \$300 million of business each year. And the stately exterior shows no sign of all the computing power the company has put to work during the last four years.

Founded in 1984, Coopers Animal

Health is a 51:49 percent joint venture between two much larger corporations, Welcome and ICI. Its goal from the beginning was to expand on the parent companies' expertise in medicine in order to become the world's leading vendor of veterinary products. This was a very tall order for a new company, because the worldwide veterinary market is stagnant and very competitive, with low margins.

The founders saw an advantage in starting from scratch. It gave them the opportunity to build their business and their information system hand-in-hand. With careful planning, their computer systems could be a competitive advantage, as well as an administrative necessity.

Taking six months to plan their strategy, the guiding principle was to design their systems around the needs of Coopers Animal Health, rather than around the existing IBM mainframe systems of the parent companies.

Information systems manager Richard J. Larter explained that this strategy led them to adopt a nontraditional data processing approach. Whenever possible, they hoped to use existing packages, rather than doing extensive software development. With U.K. offices scattered from Glasgow to Surrey, they planned to make heavy use of office automation and communications. For their unique data and applications needs, they wanted a relational data base system and 4GL. Finally, they based their planning on a distributed processing model, with users taking much of the responsibility for "ownership."

Data General was chosen from a short list of vendors that included IBM, DEC, and Wang. Although Coopers was "very unhappy" with the terms of DG's contract, eventually they were able to establish a good and lasting working relationship, according to Larter.

The initial design of the system called for CEO to run on a network of Desktops, but management quickly realized the Desktops were not up to the task; they threw them out and replaced them with MV/4000 DCs. At the end of 1985, they installed an MV/10000, and soon had a large number of the secretaries using word processing and electronic mail.

A major complication was getting the MV into the headquarters building. Part of the roof had to be removed so a crane could lower it onto a specially reinforced attic floor—directly overhead of the board room.

Meanwhile, they were selecting packages for sales order processing, purchasing, payroll, and financial reports. They also adopted Cybertek as a 4GL and Oracle for a DBMS.

In the interim, however, there have been two major reorganizations and some cutbacks in the MIS budgets. Nonetheless, they are now installing manufacturing control systems and working on export control, production control, and forecasting modules. The goal is to have 80 percent of the employees working with the systems. △

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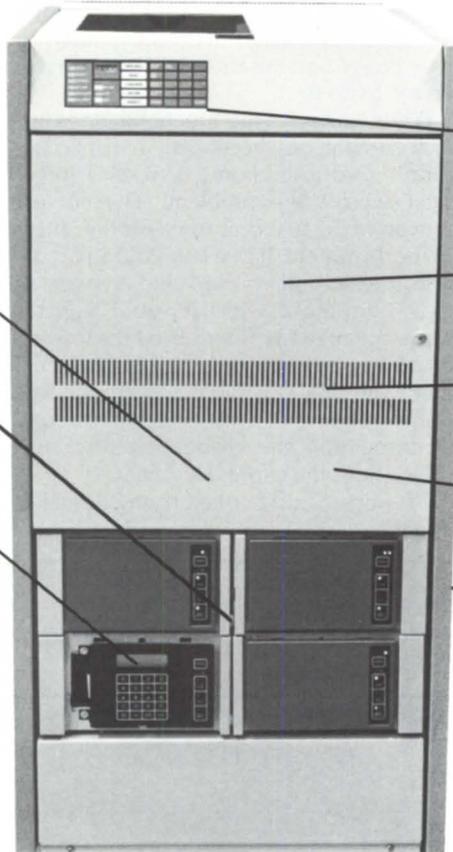
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This function key solution can change your CEO documents from upper/lowercase letters to all uppercase

by Paulette C. Scarry
Special to Focus

For a group as small as ours, 14 on-site and 4 remote-site users, I am the system manager, the CEO manager, and the help desk all rolled into one. Since we all use CEO, I spend half my time working out problems, figuring out how to do things, standardizing procedures, answering how-to questions, and finding documents that "my" computer has lost.

Last week, a secretary asked if it was possible to change an upper/lowercase document to all uppercase letters. I said that CEO doesn't have that capability. When she realized she had to retype a seven-page speech, the look on her face would have melted the heart of Simon Legree. I told her I would try to find a way.

Someone in the office suggested using global replace, but that would make the user go through the document letter by letter, which would take as long as typing it over. How about a function key?

I worked for two days and realized that because of limited command space I needed four function keys to do the job. It worked, but the results were inconsistent. The cursor sometimes wound up in the middle of the document and only changed the document from that point to the end. Did I need more function keys to return the cursor to the top of the document after each letter? My "solution" was beginning to look more like a Rube Goldberg contraption.

A call to Atlanta Software Support confirmed my conclusions; there was no way

around this. They suggested working out something in Present, but I don't have the latest update. Also, this wasn't a workable alternative, because I'm the only one who uses Present, and users would have to rely on me to do it.

While staring at my function keys with a document on the screen, I realized I didn't need to go home between letters. That wasn't the problem! The cursor moved to the first occurrence of the letter in the document. If that letter didn't occur until the second or third line or page 2, that is the point at which it would begin to make the changes. If I inserted the lowercase letters in order at the top of the document, the cursor would maintain its position on that line while it moved along, ensuring that the changes were made throughout the entire document.

Of course, I got hooked trying to make this thing fancy, so it took another day to

finalize my masterpiece. The result is shown in Figure 1. Most of my problems involved getting the cursor in the right position to begin the process and ensure success. I couldn't have people typing in the alphabet, using the function key, and then deleting the alphabet line. There had to be a way to incorporate that into the function key.

The result is one function key that calls three other function keys to insert the alphabet at the top of the document and replace uppercase letters for lowercase letters. It indicates on that line which letter it is replacing and then deletes the alphabet line, leaving the original document intact, except in uppercase letters.

When I proudly displayed my work, I heard users say, "That's wonderful, but then can we change it back?" I counted to 10 before I said, "No! I suggest you make a copy of the document before you change it to uppercase letters and preserve the original."

So far, they have been successfully using it, and it does save time. Our Washington office needed it even more than we did. Although it takes time for the process to complete (depending on the size of your document), you can hit your function key and walk away.

In terms of the time I spent getting this to work, we may have the most expensive function key around.

I used up a lot of function keys, but that hasn't caused a problem yet. I am considering creating a user profile called "special effects" with its own set of function keys that anyone can use to perform specialized tasks. That might be easier than logging on as everyone and creating the keys for them. Currently, however, I am starting out small and making the keys for only people who need them. Δ

Paulette C. Scarry is the system manager for the New Jersey Governor's Office of Policy and Planning, CN-001, Trenton, NJ 08625; 609/292-3296.

Figure 1: Function keys in CEO to change documents to all uppercase letters

Function key #1

```
down arrow,down arrow,down arrow,down
arrow,insert,new line,new line,new
line,abcdefghijklmnopqrstuvwxy,execute,begin/
end line,up arrow,up arrow,up
arrow,F2,F3,F4,global
replace,y,newline,Y,newline,global replace,z,new
line,Z,new line,delete,begin/end line,execute,up
arrow,del character,up arrow,del character,up
arrow,del character
```

Function key #2

```
global replace,a,new line,A,new line,Global
replace,b,newline,B,newline (continue through and
including H).
```

Function key #3

Same as function key #2, letters i through p.

Function key #4

Same as function key #2, letters o through x.

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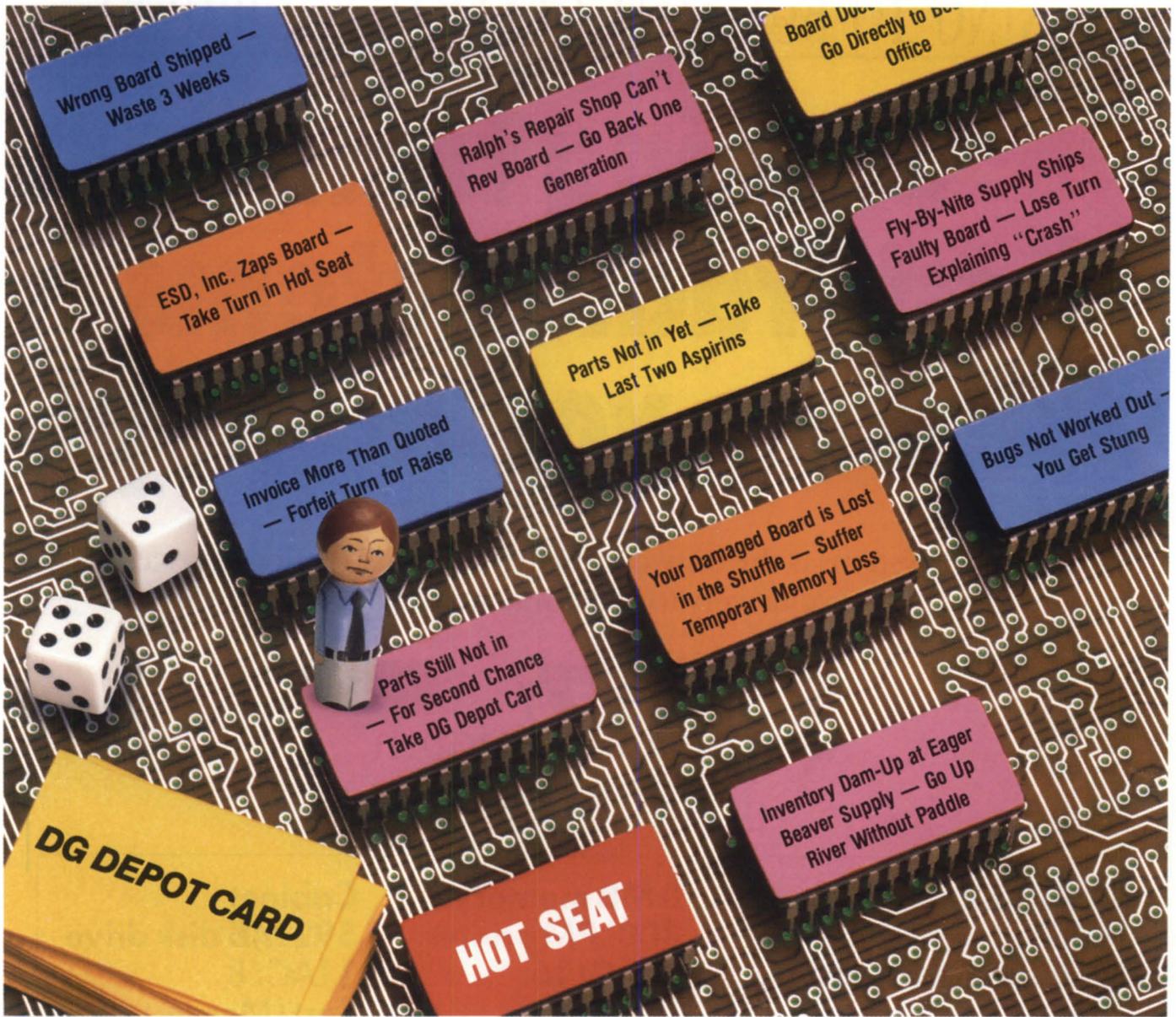
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The Cable Network

The future must meet the needs of multivendor systems

by Aldo Falossi
Special to Focus

In the near future, communications managers will have to cope with the requirements of communication networks, faster computers and peripherals, advanced intelligent phone systems, video conferences, image transmission, and the never-ending stream of new products that won't be supported by existing cable systems.

The communication environments of most Fortune 1,000 companies include systems and networks purchased from a variety of vendors. Although the user may prefer one company above the others, these systems can't stand alone; they will have to communicate with the other vendors' equipment.

Careful planning, combining a vision of the future with preventive maintenance, can establish cabling systems that will be adequate for a long time.

Major computer companies are currently marketing their own cabling system schemes. IBM, AT&T, DEC, Wang, HP, and DG, to name a few, are positioning themselves behind some of the following technological approaches:

- microwave versus fiber optics
- fiber optics versus coaxial cables
- coaxial cables versus twisted pairs
- twisted pair shielded versus unshielded
- modular connectivity versus punch-down technology
- data connectivity products versus telecommunication devices.

Each vendor's approach differs for data and voice distribution. All the manufac-

urers of network connectivity products categorize their wiring schemes into the following three basic concepts.

Main Distribution Frame (MDF)—the high-speed data communication between CPUs, or CPU to port contenders/terminal servers. The MDF is typically fiber optic or coaxial, depending on the transmission rate or unique application, such as manufacturing facilities or secure buildings, like U.S. embassies.

Intermediate Distribution Frame (IDF)—communication between terminal servers and their users, as well as distribution between the floor closets and user cluster locations.

User Device Drops (UDD)—the adaptation of the user stations to the peripheral/terminal connections via line cord and personality modules (Balun's modular adapters, network adapters, etc.). Typically referred to as UDD or drop.

Each one touts its merits as the future panacea for the communications manager.

IBM cabling system

Starting with media type 1 and ending with media type 9, IBM designed and specified the cables, but *does not* install or maintain them. They recommend IBM-trained-and-approved local installers. Type 1, 2, and 3 cables are designed for data and voice using shielded and unshielded twisted pairs in different configurations, depending on the user requirements. For example, type 1 and 2 cables will support Ethernet devices using adapters to convert from coaxial cable to shielded twisted pair.

AT&T premise distribution system

Based on unshielded twisted pair and augmented with fiber optic equipment, the AT&T (PDS) cabling system stems from AT&T's expertise in telecommunication with many adaptations for data.

Although AT&T doesn't sell a cable

management system, the PDS supports coaxial devices via Balun's. (These devices match impedance among different coaxial cables and twisted-pair wiring.)

Since AT&T designed PDS to take advantage of its existing telephone wiring for data, the PDS is based on unshielded twisted pair. The adaptation of other telephone devices is used by AT&T for data communication, such as punch-down blocks and RJ device jacks.

DEC: DECconnect

The DECconnect cabling scheme supports high-speed data communication via coax (Ethernet), twisted pair for voice, and low-speed data communications, with provisions for video by recommending four different types of cables:

- four unshielded pair for voice
- four shielded pair for low-speed data communication
- baseband (Ethernet) coaxial cable
- broadband coaxial cable for video.

In contrast to IBM and AT&T, DEC designs and bids the installation, although in most cases, DEC subcontracts the work to local DEC-trained installers. DEC designed its connectivity devices to match the requirements for high- and low-speed data, voice, and video.

Each manufacturer has designed its products to maximize its own profitability. In a free enterprise society, that's to be expected, but it complicates life for the communications manager who has to cope with the resulting diversity of connectors, patch panels, distribution devices, cables, etc.

Each computer manufacturer can satisfy its customers' data communication needs. Some companies tend to integrate voice (IBM/Rolm, HP/Mitel, etc.) on a best-efforts basis.

Take, for example, Mr. McCabe, data processing manager for a large hospital. He needed to find a company that could

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FOCUS ON: CABLE MANAGEMENT

provide a cable management system for his Data General, Honeywell, IBM, and Wang systems, along with 71 assorted personal computers.

Who could provide the expertise to incorporate the various computer networks on a single cabling system? How could Mr. McCabe be assured that a company wouldn't be partial to one major manufacturer, but flexible for all the CPUs?

Second-party manufacturers of cross-connect equipment and cables, such as Black Box and Glasgal, sell the individual parts without installation and/or maintenance. In most cases, they lack data communication or telecomm expertise with the specific products of various manufacturers. The majority of independent installers (most of which have either an electrical or telephone background) available to Mr. McCabe could provide cable pulling and maintenance, but lacked the necessary expertise to design a sophisticated data/voice management cabling systems.

Modular vendors, such as Mod-Tap, Nevada Western, and Startek provide RJ-type connectors, Balun's modular devices, manual data/voice PBXs, and some devices compatible with IBM, AT&T, and DEC cabling schemes. However, these vendors don't install cabling, and few of them can clearly define how they put systems together.

Mr. McCabe spent a considerable amount of resources in learning techniques, products, and manufacturers before deciding to ally himself with a company that could help him design an optimum cabling system that would support his existing computer, data, and telephone communication needs. Together, they designed a uniform wiring scheme based on four twisted pairs, using personality modules to adapt it to the different computers' transmission media. The wiring supports local networks with data, voice, and video for end-users.

The company furnished the connectivity devices necessary to change the different computer communication schemes to a standard, uniform cable management system throughout his facility, including provisions for growth.

Communication managers who do not take wiring seriously will end up with a cabling system that limits future services, equipment, and capabilities. The alternative is high blood pressure.

The data communication executive must plan now to meet the long-range information needs of a company. Here are some of the important technical developments that will affect the future of the Fortune 1,000

cabling systems:

- graphics and image processing
- distributed operating multivendor systems
- flexibility and expandability to the user.

These developments will enhance the value to the user of computer systems and also put increasing demands on the design and implementation of the network. Remember: A supertrain of tomorrow cannot run on the railroad tracks of today.

Graphics and image processing

Hardware costs will continue to fall, which will enable the computer user to incorporate visual patterns with data and text. Graphics packages for creating charts and graphs have become part of the business community. Imaging goes beyond graphics by allowing photographs, full-motion video, etc. Words alone are no longer sufficient to communicate the whole story. The bottleneck in processing images to the user (besides the hardware cost) is the network, or more specifically, the poor planning and selection of the components comprising it.

Distributed operating multivendor systems

In the future, users will have access to the resources of multiple computer systems from a single device. Whether you use a personal computer, terminal, portable, etc., it will most likely be cabled to other systems across a network, while the other systems on the network play the role of servers. Without proper network design, a user will not be able to take advantage of other systems' data, programs, or files.

Flexibility and expandability

A variety of networking products and cabling solutions already exist to meet the needs of a wide range of hardware and application requirements.

During the next decade, increasing demands will be expected from the network/cabling system to provide a flexible means of distributing resources. Statistics indicate that a user station will change in configuration and location every 12 to 18 months, while growth in computer resources will increase at 30 percent per year compounded. This means the communication manager must plan now for the needs of tomorrow. No sense in adding on to a facility every year. Once is enough! Δ

Aldo Falossi is the vice president of Cable Management Systems, 17955 Skypark Cir., Suite F, Irvine, CA 92714; 714/261-2622.

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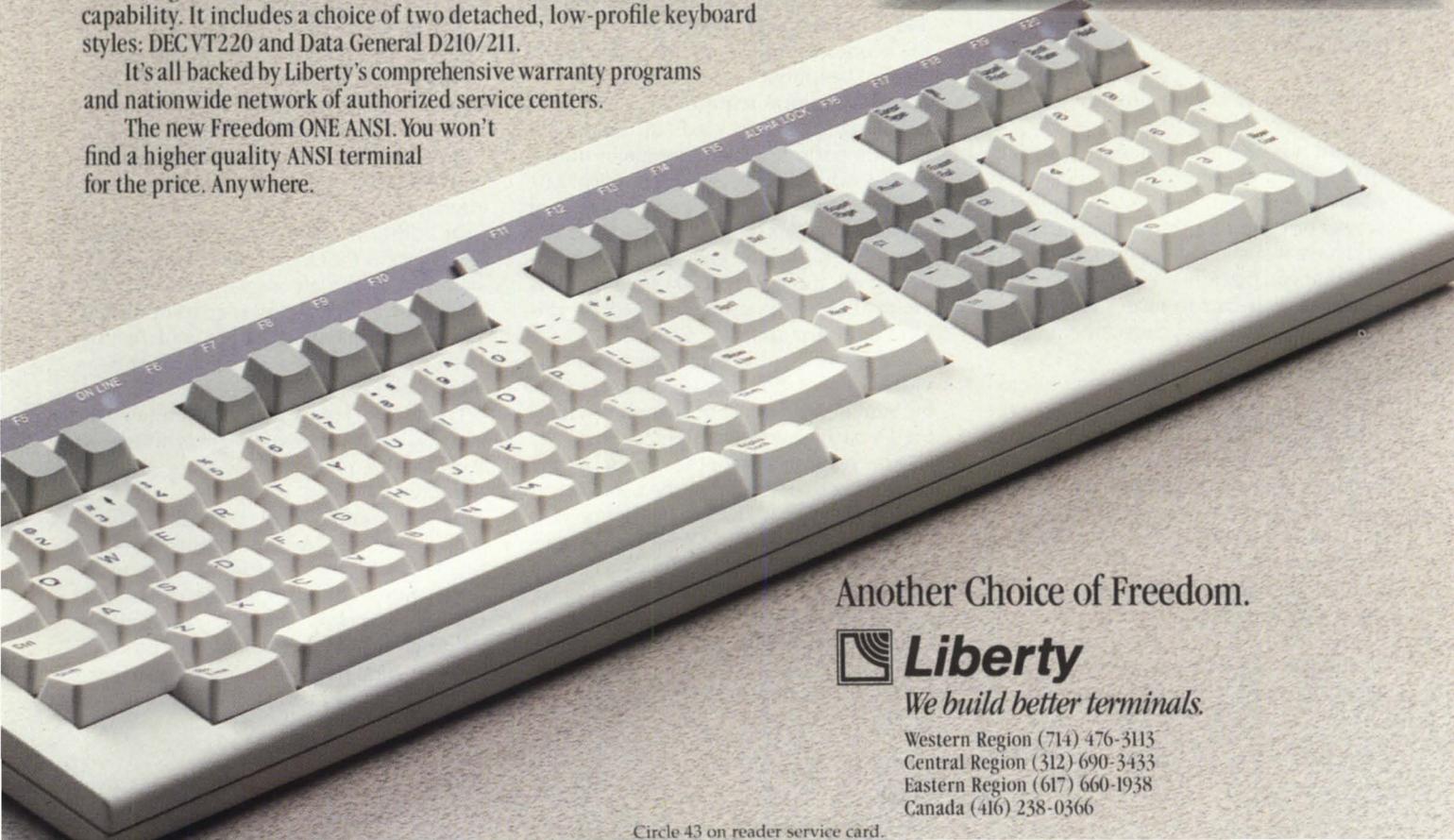
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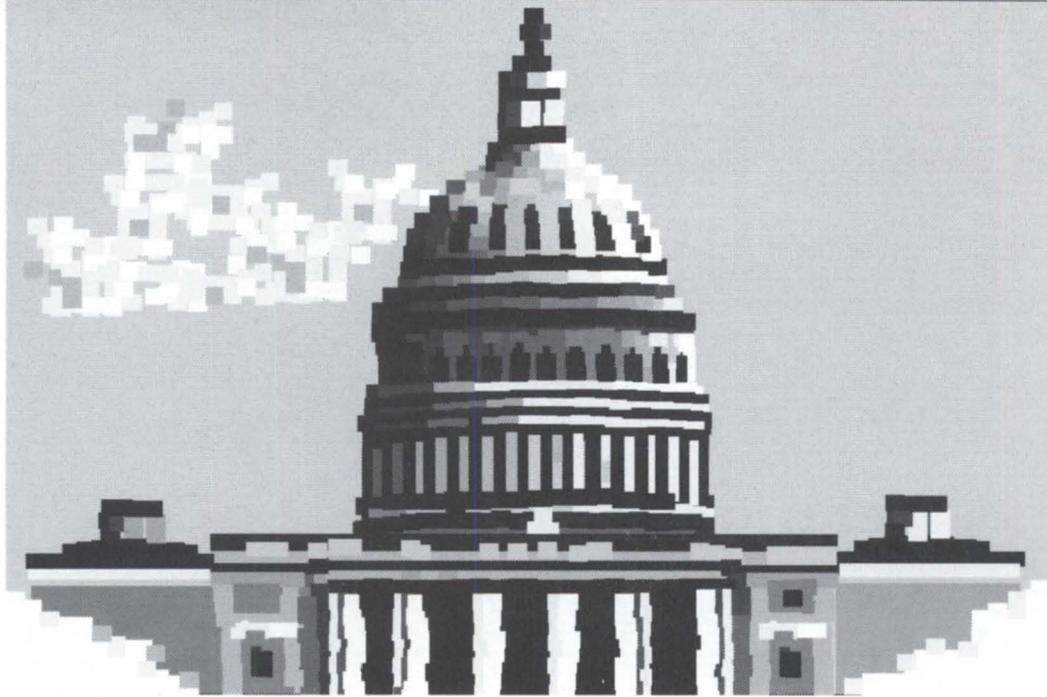
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On-line government

The government's wealth of information is accessible to anyone with a computer

by Michael E. Marotta
Special to Focus

You can access your government with your personal computer.

Until now, if you wanted to get or give information to government officials, you had to be on the "inside." It might take weeks or even months to place a request and have it answered. If you had information that you thought your officials needed to know, you had to face a bewildering array of agencies, departments, and people.

Fortunately, computers have revolutionized some of this government red tape. Several federal agencies operate electronic bulletin board services (BBSs) that give out data. Some of these are available to the public for the price of a phone call. Others have modest charges, generally less than \$100 per year.

At the state level, proceedings of several houses and senates are also available (for a price).

Libraries are perhaps the most active users of the BBS technology. Several states,

public colleges, and cities make it possible for you to "browse the stacks" via modem.

The U.S. Department of Commerce operates several public access bulletin board services. The kingpin of this network is the Economic Bulletin Board (202/377-3870). This bulletin board provides statistical data based on leading economic indicators. You can also get press releases and summaries of reports produced by the Economic Affairs agencies. The BBS is open to the public without charge, and no preregistration is required.

Among the many kinds of data available are current measurements of industrial production, inventories, corporate profits, retail sales, plant and equipment expenditures, housing starts, the consumer price index, and the gross national product. In all, more than 1,000 separate files are available if you have a need for this kind of information.

The Economic Bulletin Board also provides information about other federal bulletin boards. Most of them are within the Department of Commerce. Since the DOC is responsible for the census, it isn't surprising that several of the boards deal with census data. There is the Population Estimates BBS at 301/763-5225. Census information is also available for you by state or region. The State Data Center Bulletin Board requires that you register in advance by calling its voice line at 301/763-1580.

The Microcomputer Information Cen-

ter (301/763-4576) can be your source for software and hardware reviews. This is especially useful, since the federal government can be more objective than most other sources. There are lively discussions about artificial intelligence and computer security. (The DOC is responsible, through the National Bureau of Standards, for managing the data encryption standard and the data encryption algorithm.)

For more detailed information about computer security, connect with the Institute for Computer Sciences and Technology (301/948-5718). This DOC agency is under the aegis of the National Bureau of Standards. Like most of the other DOC BBSs, it's available to the public with no preregistration.

In addition to this computer-oriented information, the Department of Commerce has BBSs for climate assessment (301/763-8071, voice line for preregistration) and East Coast marine weather and fishing news (301/899-3296, voice line for preregistration).

While the Department of Commerce is the leader in electronic government, it isn't alone—there are the state governments as well.

Anyone with a little computer savvy who's interested in state politics can get the daily activities of several state houses and senates. For example, you can track a bill as it moves through committees. Additional data is available on product bids for state purchases. Public hearings, bills just signed into law by the governor,

and listings of state and local government officials are also available.

Hannah Information Systems (321 North Pine, Lansing, Michigan 48933) was founded in 1985. Its data base contains the full text of house and senate activities both on the floor and in committee. In addition to covering Michigan, it provides access to legislative activity in Ohio. Clients always have access to both sets of information.

Hannah's services include data on the state's "extended purchase" contracts. Any local government can buy products from the state at the state's cost. Knowing these prices is helpful to potential suppliers who place bids. It also gives an objective measure of the value of goods in large quantities.

Hannah's data bases are used by more than 120 individuals, associations, labor unions, state administrative departments, school districts, colleges, counties, and cities. The service is available to political science majors at Michigan State University, Western Michigan University, and the University of Michigan.

A key feature of the Hannah system is the secure electronic mail option, which lets users send confidential messages to anyone on the system. People with common interests use this feature to create a ripple effect as they coordinate their lobbying efforts. A user who accesses the BBS on behalf of a school board probably also drives a car; an email message about radar detector legislation may inspire some action, such as writing a letter to a state representative.

Hannah's customers use a wide variety of computer hardware and software to access the data base. Many users rely on IBM PCs and compatibles running communications programs that allow you to dial up the data base and save or capture the information to a diskette or printer.

The Hannah system is menu-driven and allows for searches by keywords or the sponsor's name. Charges for the services follow a simple rule: the more you use it, the less it costs. Startup runs \$250. This pays for two weeks of unlimited access. You can be billed by the minute at \$1.50 per minute. You can sign a contract for 100 hours of on-line time on a yearly basis for \$5,000; this reduces the cost to \$.83 a minute.

Legitech (The Senator Hotel, 1211 L Street, Suite 207, Sacramento, California 95814) offers these kinds of services for both the federal Congress and the legislature of California. Its "Washington On-line" service tracks campaign contributions.

The Congressional Tracking system follows all current federal legislation. Moreover, the system lets you rate any member's voting record. Floor and committee schedules are also available. The federal data base and the California data base can be searched by keyword.

Legitech costs start at \$750 and can extend up to \$5,000 per year. Like the Hannah System, the more you use, the less

each unit of service costs. Training is included in every contract.

These services are expensive for most people. For about \$1,000, you can have complete access to Congress or a state legislature. However, many relatively small, politically active groups can and need to afford the cost. For the individual, there are alternatives. Electronic bulletin board services have low start-up costs.

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Among the thousands of BBSs nationwide, many have political message file sections.

William Sederburg is a state senator from Ingham County (Lansing), Michigan. His "Political Forum BBS" (517/339-3783) offers information about local, state, and federal government.

The BBS contains a wide range of message sections. Topics include law/courts, rights/liberties, and money/poverty. There are also sections for discussing foreign affairs and computer technology.

His office provides downloadable files that summarize both capitol issues and business issues. The forum also features the texts of bills and amendments proposed by Senator Sederburg.

The Political Forum began in 1983 as a message section on the Compunet BBS of Dr. Gordon Williams, a Michigan State University psychologist. The political topics threatened to overwhelm the otherwise technical slant of Compunet. Political Forum was started as a separate operation in 1984, and in the past four years, it has received more than 60,000 calls.

The BBS has served as a means for people to pressure Senator Sederburg to change his stand on particular issues. For instance, he said, "I opposed a seat belt law as an infringement on personal liberty. A lot of users dialed in to give their views, and I engaged them in discussion on the topic. After a time, I realized that I didn't have a defensible position." He voted for the Michigan Seat Belt Law.

Senator Sederburg was also instrumental in arranging the first electronic public hearing in the state senate. The "hearing" was run on the Learn BBS (517/355-3276). (Learn is funded by a Kellogg Foundation grant.) They got more than 600 calls from people who expressed their opinions on what the state's educational priorities should be.

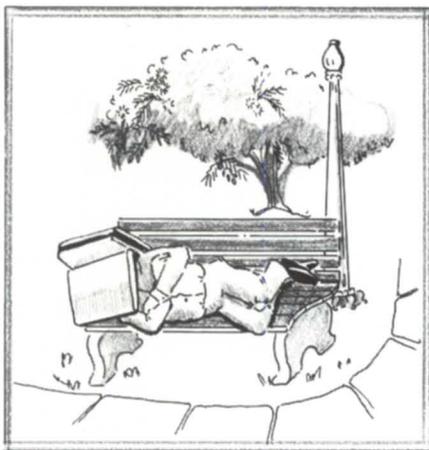
While he expects to see more examples of electronic government in the near future, he is acutely aware of the issues that their use raises. "I see increasing tension concerning rights of individuals. The biggest battles will be over credit bureaus and credit reporting agencies. I was asked for a credit card number to cash a check. This facilitates an information transfer and is also an incursion into individual rights."

Your own state and local government agencies are also probably busy establishing BBSs intended for communication. Although they may not be available to the general public, in many cases, you can arrange access to the system if you can demonstrate a "need to know."

In Dayton, Ohio, the Miami Valley Re-

gional Planning Commission provides email for urban planners and civil engineers. It also carries construction indexes, calendars of events for local governments, and economic profiles of communities based on U.S. Census data.

Darryl Kenning is the city manager of Centerville, Ohio. He uses LINUS and LOGAN, two BBSs run by the National League of Cities. LOGAN also serves as a message center for members of the International City Managers' Association. Kenning logs on to these services to keep track of federal legislation and other issues. He also stays in touch with officials in other cities through BBSs like Govcomm and Electronet.



He gave a real-life example of how these message centers serve him and other elected officials. "A nearby community had a backup accident involving heavy equipment. The operator had taped the warning buzzer, because it was located right behind his ear. Now you might tell people about this if you met them face-to-face. Drafting a letter would take more effort and might not be as productive. With the bulletin boards, you can put up a message, and within 24 hours, dozens of other officials will get the word and maybe avoid a similar situation."

Kenning said that he uses the BBSs to check the agendas of other local governments. "If I want to set up a meeting with someone, I can check to see if the day is available or if a council meeting is scheduled."

"It is clear to me that although the startup is slow, electronic information transfer is going to have a serious impact during the next 20 years," he said.

In response to "right to know" legislation, Michigan State University established a node of OSHA's Material Safety Data

Sheets (MSDS). Anyone with a need to know can connect to 517/353-8500, select CLVAX1 as the host, and log on as MSDS (no password). Several thousand chemicals are listed with information such as toxicity, first aid treatment, and fire-fighting precautions. State libraries in Illinois and Colorado run BBSs. So do several colleges and universities. Kansas City, Missouri, recently established a BBS. Typical of these is the CLSI system used at Michigan State University (517/353-8500)—select CLSI as your host, no password.

Using CLSI requires some prior knowledge. It isn't user-friendly. For instance, you would never guess that ctrl-P is the signal to get the system's attention when you want to abandon a search. The MSU library provides a user's guide to the command set. This pamphlet explains how to look up a book by title (start with a comma), author (start with a period), subject (start with a semicolon), or call number (start with a slash).

The CLSI software looks for the dollar sign (\$) in the last place to serve as a wild card. Entering .COMPUTERS will bring only the books that have just the word "Computers" as the title. Using .COMPUTERS\$ will show all the books that have the word "Computers" as the first word in the title.

Public libraries are generally user-friendly. They are happy to provide the materials you need to learn how to use their computers, but sometimes you have to find the right librarian. Although libraries are making great strides toward electronic access (*The Wilson Library Journal*, February 1987, contains a step-by-step guide on how to set up a BBS), many librarians are still in the book age. When I asked a librarian about computer dial-up services at that library, I was told that none existed. I thanked him politely, hung up, plugged in my modem, and accessed his library's CLSI public service.

Despite these kinds of inconveniences, government agencies are moving toward making information more readily available. Whether you want to know about the weather off Marblehead, the companies that sell public-key cryptosystems, the status of a legislative bill, or whether your local library carries this magazine, all you have to do is fire up your modem. Δ

Michael E. Marotta is a systems analyst with a decade of experience on Data General and other systems. He specializes in creating user manuals.

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A textbook example

Legal data base shows how on-line research has grown

by Kathleen Petters
Special to Focus

In 1872, 21-year-old John B. West opened the John B. West Publisher and Bookseller, offering a line of law treatises, legal forms, and a lawyer's guide to the Minnesota Court Rules in Swedish. The company he founded is still in the same publishing business, but West wouldn't recognize it—today it has expanded to include on-line legal research, and offers access to many other commercially important data bases.

By 1897, the St. Paul-based company was publishing volumes of case law for every region in the United States and had developed a new system for indexing case law according to category, topic, and subtopic. West's Key Number System has become a standard index to help legal researchers find principles of law in federal or state cases dating back to 1638. The system now has more than 14,000 topics and subdivisions.

With the advent of computers, attorneys began asking for a fast, efficient way to isolate relevant points of law within the voluminous materials available for case research and preparation. West developed Westlaw, a computer-assisted legal research service that offers prepared case synopses, headnotes, and key numbers with the full text of court decisions. Old research standards have been incorporated into the services, making it compatible with traditional research tools.

Since its introduction in 1975, the information available on Westlaw has increased exponentially. Legal coverage includes editorially enhanced full texts of federal and state cases, U.S. Code and state statutes, regulations, administrative law decisions, and legal periodicals. For example, a lawyer researching a tax issue can retrieve tax code sections, search for IRS private letter rulings, retrieve relevant

federal and state case law, find expert advice in a Bureau of National Affairs (BNA) Tax Management Portfolio, and check the afternoon's late-breaking tax news.

While data bases in topical areas such as tax, securities, military law, energy, utilities, government contracts, labor, and international law have grown to meet the needs of specialists, the overall increase in on-line resources is even more impressive. There are now more than 1,400 data



Many lawyers make a practice of using on-line legal research.

bases on the system—more than 150 of them were added last year alone.

Coverage has expanded beyond traditional legal resources to include extensive business and financial information. The data bases keep users abreast of issues that have an impact on business. News data bases provide daily reports on court, legislative, and agency actions, plus articles and commentary on news stories of the day. Legislative data bases allow users to track state and federal bills affecting businesses.

Access to a broader range of materials has been accomplished through gateway arrangements with several on-line data base vendors. Current stock, industry,

financial, and statistical information is provided by Dow Jones News/Retrieval, the only on-line source of *The Wall Street Journal*. Another gateway, from Dun & Bradstreet, offers information on more than 9 million United States businesses, and the Family Tree Service identifies structural interrelationships within business organizations. West is the first third-party vendor to offer the Dun & Bradstreet Business Information Report and Family Tree Service on line.

Subscribers also have access to VU/Text, a data bank of full-text newspapers. VU/Text, a Knight-Rider company, also offers access to national and regional business reports and periodicals.

Dialog Information Services is also available via gateway, offering a range of industry, medical, scientific, business, legal, demographic, and statistical topics. Also available is PHInet, an on-line federal tax data base service developed for tax and pension practitioners by Prentice Hall Information Services.

A growing number of law firms, military installations, and legal departments in federal government offices access Westlaw on their Data General equipment. Several combinations of Data General hardware and various communications software packages allow access in character mode. In addition, a number of subscribers access with 3270 support, which provides block mode access at speeds up to 9600 baud. Features of this interface include programmable function keys, highlighted search terms, query editing keys, direct access without dialing, and error-protection protocol.

Once the DG equipment and software combination has been selected, customer service representatives work with the customer to facilitate the installation and access.

Once access has been established, regionally located account representatives train new users on site or at training centers located across the country. Other training options include Westrain, an on-line, user-interactive training course with 12

lessons explaining basic techniques, and Practice, which helps users develop skills in forming queries, browsing through search results, and using commands.

Customer service representative are available to explain commands, messages, search techniques, editing, special features,

and the use of special services such as Insta-Cite or Shepard's. In-depth questions dealing with sophisticated word searches, issue spotting, and new data base features or additions are handled by reference specialist attorneys. They also help refine searches or suggest other

methods of formulating queries. Assistance from customer service is free to subscribers. Δ

Kathleen Petters can be reached at West Publishing, P.O. Box 64526, 50 W. Kellogg Blvd., St. Paul, MN 55164; 612/228-2786.

ABA and Lexis join forces

by Deborah Burt
Special to Focus

Ten years ago, the impact of micro-processor technology on the practice of law was barely discernible to most lawyers, but today, computer-assisted legal research has innovated the legal practice. For example, the Lexis service provides an electronic search and retrieval capability applied to a vast, ever-expanding body of judicial and administrative opinion. Many lawyers find that computer-assisted legal research is no longer a luxury now that it is more affordable. Under an agreement between the American Bar Association and Mead Data Central, Lexis/Nexis is now available to ABA members at reduced rates. With no monthly access fee, all they need is a terminal or personal computer with communications software and a modem. Access is through ABA/net, ABA's electronic mail system.

Lexis is also useful to tax attorneys. The Lexis service provides a comprehensive data base of federal and state tax materials. They can find federal cases; Tax Court memoranda; General Counsel Memoranda; Actions on Decisions; private letter rulings; revenue rulings and procedures; the daily tax services of the Bureau of National Affairs, Commerce Clearing House, and Tax Analysts, Inc.; and other information sources in the Lexis Federal Tax Library. The information also includes tax cases from all 50 states and a growing body of state tax commission decisions.

In addition, there is access to Auto-Cite, the full text of *American Law Reports* annotations, Shepard's Cita-

tions Service, a full text library of law reviews, the news and business information libraries of Nexis, company financial reports, and other libraries—all at no additional charge.

Even the most diligent tax attorney cannot keep up with the daily flood of court decisions and IRS rules and regulations. Yet difficult questions about the tax laws come up all the time, whether a lawyer is advising a client on the tax implications of a business transaction, preparing an estate or trust instrument, or representing a client in a dispute involving tax laws. Because on-line services add federal tax documents as soon as they are issued, it is easy to find today's answers to today's questions.

To demonstrate how computer-assisted research works, consider a specific question about federal tax law.

Corporation XYZ is filing for bankruptcy under Chapter 11. The corporation stipulates in its reorganization plan that federal tax payments be first allocated to pay employee withholding taxes, since under § 6672 of the Internal Revenue Code, corporate officers can be held personally liable for unpaid trust fund taxes. Have the federal courts allowed debtor corporations to pay federal trust fund taxes before paying nontrust fund taxes, thus avoiding the penalty?

You would probably start your research the same way you would if you were using books or loose-leaf services—looking for cases that refer to § 6672. The result would be hundreds of cases, whether you transmitted your search to a computer or thumbed through a printed index. However, using computer-assisted research gives the researcher both flexibility and

precision. For example, you can combine a number of ideas in a search request, add or delete search terms as you read, and evaluate the cases you find. You can even narrow a search to cases decided in a particular court or written by a particular judge.

A Lexis search request for cases that discuss the implications of § 6672 to a debtor corporation's officers might be worded like this:

§6672 W/40 bankrupt! or debt!

The exclamation mark expands the search to include all forms of the search words, i.e., bankrupt, bankruptcy, debt, and debtor. The connector, W/40, specifies that the word bankrupt or debt must appear within 40 words of a reference to § 6672.

Once transmitted, it usually takes just a few seconds to process a Lexis search. Most users then read cases displayed in the key-word-in-context (KWIC) format. Of course, when you have found the answers you are looking for, you can print out your results or store text on a disk.

ABA/net was originally developed to provide lawyers a low-cost, easy-to-use telecommunications network. With the addition of the Lexis service, ABA/net offers a full range of time-saving computer services to any lawyer with a personal computer. Δ

Deborah Burt is affiliated with Mead Data Central located at 9393 Springboro Pike, P.O. Box 933, Dayton, OH 45401; 513/865-6800.

The new XLPT

Insights on what this rev of AOS/VS will do for you

by Gary Rodgers
Special to Focus

Although the new XLPT for AOS/VS rev 7.62 is upwardly compatible with previous versions, there are some changes, enhancements, and optional new features. This information should help you assess installation requirements and operational differences, as well as gain a general understanding of the new features.

One of the first things you may notice when you load your new release is that there is no longer an XPLT.PR—the plotter cooperative. The XLPT process now includes all of the plotter functions. As a result, you can flush, cancel, or restart active plot jobs, and use clean-up files with plot devices. In addition, CXSTATUS now functions with plot devices.

The new XLPT is capable of handling up to 15 devices, which lowers the process overhead significantly. By default, CX START assigns devices to an XLPT process until it reaches the 15-device limit. You may override this by using the new /NAME= switch to specify (by process name) the particular XLPT that you want to control the device. XLPT does have a larger working set, but when running four or more devices, it has a smaller working set than the total of the same number of old XLPTs.

8-bit versus 7-bit operation

Previously, it was possible to start an XLPT for a particular device with an /8BIT switch so that all 8 bits of each character would be sent to the device. Without this switch, XLPT truncated the characters to 7 bits. The new release expands the

amount of control you have with the introduction of a /7BIT switch of the CX START command, and /7BIT and /8BIT switches on the QPRINT command. The /8BIT and /7BIT switches on the QPRINT command allow you to specify the mode in which to print the file. If you specify neither of these switches, XLPT uses the default that you selected with the CX START command, or 7 bit if there was no selection. XLPT reports an error and flushes the job if you start the device as 7 bit and then specify 8 bit.

Binary mode

There are several changes related to binary functions.

- Earlier versions of XLPT printed the associated clean-up file only after the last copy of the binary job. Now, when you enable binary mode, XLPT prints the clean-up file after each copy of each job, whether it is a binary job or not.

- XLPT no longer opens clean-up files exclusively. However, you should be aware that XLPT buffers these files, and modifications are not seen by XLPT until the next time you assign that file with a CX BINARY command.

- In prior revisions, XLPT always logged the number of pages printed for binary jobs as one. Now, it uses the page limit as the number of pages printed. You can set the page limit with the /PAGES= switch, which was formerly meaningless for binary jobs. If you do not specify the page limit with the switch, XLPT estimates it based on the byte length of the input file, using the same method that EXEC uses for nonbinary files when it isn't specified. Furthermore, the number of pages printed (as shown on trailer pages) and the number that appears in the system log file now agree; before, they weren't always the same.

- A new switch, /PASSTHRU, is available on the QPRINT command. It's similar to the /BINARY switch, except that

there is no special interpretation of the <377> character.

Transitions

There are a few differences related to headers and other between-job phenomena.

- There is a new /DOCUMENTNAME= switch on the QPRINT switch that sets the second header-page banner in the same way the /DESTINATION= switch sets the first banner.

- Previously, if XLPT printed a nonbinary job after a binary job, the first page would be missing the page header as selected by the /TITLES switch on the QPRINT command, and the numbering for the remainder of the pages would be off by one. This now works correctly.

- In the past, if XLPT printed a binary job after a nonbinary job, it would be preceded by a spurious form feed. This no longer happens unless the clean-up file, which XLPT always prints before the first binary job, contains a form feed.

- XLPT now adds a form feed to the end of a file only if it doesn't already end in one, thus saving paper.

More messages

You will notice an increase in the amount of information that is available from XLPT—both status and error information. Error messages, whether they appear in the operator log file (@CONO) or on the user console, generally now include a second line of clarifying text. Here are some conditions that result in new messages in the operators log file.

- CX SPOOLSTATUS now displays the following additional information:

1. an indication of whether 7-bit or 8-bit mode is selected
2. the name of the clean-up file if binary mode is selected
3. the name of the default mapper filename, if any.

- An error is reported if a print job with

/NORESTART set is restarted. A job may be restarted either by the operator with CX RESTART, or due to a system or EXEC failure.

- If a printer jams, runs out of paper, or is off line for more than 10 minutes, XLPT sends a message requesting that the printer be checked.

- When a printer is ready for alignment after a CX ALIGN command, XLPT sends a message to report that the printer is ready for alignment.

- If XLPT encounters any problem reading a forms specification from a forms file in :UTIL:FORMS, it reports it, and then stops processing on that device until the problem is corrected. Formerly, it reported any forms problem to the user on printed output, and job processing continued with the erroneous form.

- The new XLPT includes extensive, internal-consistency error checking. If one of these conditions is detected, XLPT displays a message along with a dump file identifier.

- If you attempt to execute XLPT from the CLI, you get the error "caller not privileged for this action" or "illegal cooperative message," depending on where you attempt it. Users who attempt this will get the error at their own consoles.

New error messages that can appear on the listing are caused by these conditions:

- attempting to print a nontext file, including program and symbol table file types
- using a /BEGIN page number that is greater than the actual last page in the printed file.

File inclusion

You may include files in other files at printing time in either nonbinary or binary jobs by inserting a command string where you want to include the file. This is the syntax:

```
<377>1;n;pathname<377>
```

You must fully qualify the pathname from the root, and assign "n" the number of bytes in the pathname.

New optional character mapping

The flexibility of character mapping using mapper files is significantly improved. A new mapper file format has been defined, although XLPT still supports the old format. These are the major characteristics of the new mapping scheme.

- Any single character may be mapped, not just the characters in the Data General International (DGI) character set.

- The mapped value may be up to a 32-

character string.

- Nonprinting characters may be mapped to printable characters.

As before, mapper files are assigned to a device with the CX START command, but now the user may override this default by using the new /MAPPER= switch on the CLI QPRINT command.

There are four standard XLPT mapper files that are shipped with AOS/VS: ASCII, DGI, UPPER, and DGI_TO_ASCII.

The ASCII file defines the printable 7-bit ASCII characters, and the DGI file defines the printable 8-bit DGI characters. Although these two files define character sets already predefined in XLPT, they are useful for reverting to the standard when the operator has assigned a special mapper file to a device. The UPPER file is like DGI, except that it maps lowercase to uppercase. The DGI_TO_ASCII file is also like DGI, except that it maps non-ASCII-standard characters to ASCII-standard characters.

A new EXEC command, MAPPER, has been added that allows an operator to change the mapper file on a device without having to restart the device.

Although mapper files are easy to use, they are also powerful tools that can be used to solve many translation problems, providing compatibility with the growing number of foreign devices and answering the special needs of non-English-speaking countries.

The new XLPT mapper capability accommodates both Japanese character sets—Kanji and Katakana. Kanji is a superset of the ASCII character set, which includes 8,836 additional character codes! These characters are stored in two consecutive 8-bit bytes. Katakana is a phonic alphabet that is a superset of ASCII, but requires only one byte per character. Nippon Data General previously supported their own custom version of XLPT.

Documentation

The changes outlined here are documented in the AOS/VS rev 8 release notice and in the associated documentation. The new QPRINT command switches are detailed in the CLI documentation changes and in the help file CLI.CMD.QPRINT. The extensions to the EXEC START command are in the new *Managing AOS/VS* manual, which also contains a separate section on creating and using mapper files. △

Gary Rodgers is a software engineer for Data General in Westboro. He can be reached at 617/870-6338.

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For fund and profit

Fund Master helps nonprofit companies raise money

by Joan K. Boyer
Special to Focus

Whenever you receive a letter in the mail asking for money, chances are that Fund Master from Master Software Corporation had something to do with it. Master Software has been a supplier of fund-raising software in the U.S. since 1982. Nonprofit organizations of all kinds have been using the fund development package to help increase their charitable support.

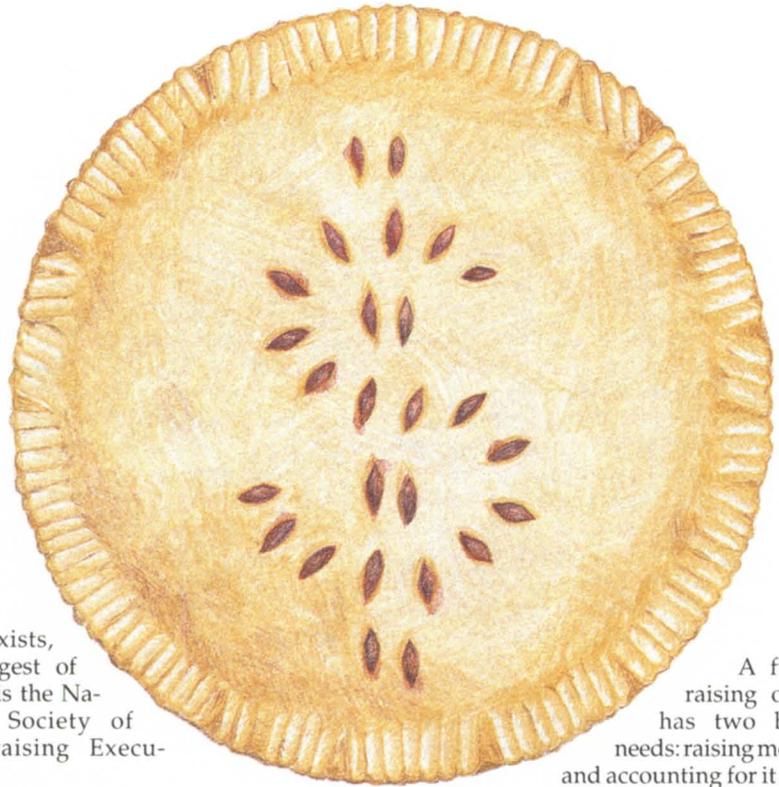
Fund development is big business, and many nonprofit institutions couldn't survive without contributions. Especially since the early days of Reaganomics when federal purse strings tightened on Medicare and other social programs, the private sector has had to take a more active role in assuming the financial burden for the public good. Nonprofit organizations have been forced to rely more on contributions to expand their offerings, to maintain quality, and in some cases, to stay afloat. Hospitals, schools, museums, art institutes, and other such organizations now think of themselves as businesses, facing such corporate demons as competition, bureaucracy, mergers, and bankruptcy.

As a result, fund-raising has gotten serious. It's no longer just the ladies' auxiliary holding a bake sale. Fund-raising is an integral part of the nonprofit structure. Fund-raising officers, usually with a title such as director of development, have gained professional stature and esteem. In fact, some colleges, notably Indiana University, now offer degrees in fund-raising. A network of professional organizations

also exists, the largest of which is the National Society of Fund-raising Executives.

Administrators and board members share in the responsibility for the fund-raising program, which is typically highly structured. A successful development program involves a comprehensive plan that includes several components, including annual donations, memorial and honor giving, major gift support, planned gift support, and donor recognition. This is coupled with an effective public relations program to result in a positive community image for the organization, and an effective, motivated board of directors which understands its role in the development process.

Of course, with the business of fund-raising becoming more sophisticated, automation has been a natural progression. Fund Master was developed in the late 1970s and made its debut as a vertical market product in 1982. Although it was designed to run on Data General products, the PC version that was released later is its biggest seller. There are more than 600 Fund Master clients in 49 states, Canada, Australia, and Israel. Fund Master is helping these offices raise money more efficiently. Data General clients include Beech Acres-Gen. Protestant Orphan Home, Catholic Charities, the College of Mount St. Joseph, the Community Hospital of Indianapolis, the Durham Arts Council, the Henry Ford Hospital, the Methodist Health Foundation, and the Metropolitan Inter-faith Association.



A fund-raising office has two basic needs: raising money and accounting for it after

it has been received. The solicitation process is much like marketing—prospects are targeted based upon demographics, financial status, and interests. Individuals, families, corporations, foundations, civic groups, and others may be considered prospects. Fund Master contains features to identify prospects based upon a variety of attributes. For solicitation, prospects are segmented into groups that have factors in common, such as prior history of giving, board memberships, civic affiliations, age, income level, or interest. Each account may be identified in many different ways. For consistent and efficient use of storage space on the computer, a system of user-defined codes is used.

Because organized fund-raising has gained attention only recently, record keeping in many fund development offices prior to computerization has been a hit-and-miss affair. It's not uncommon to find that an otherwise progressive institution has its donor records on index cards kept in a shoe box. Many of them date back to an original fund drive when the building was constructed. In fact, often the development office and the computer system are launched concurrently, so the entire process is started from scratch.

Fund-raising software simplifies the development process first by recording all information about donors and prospects in an orderly fashion, then making it easy

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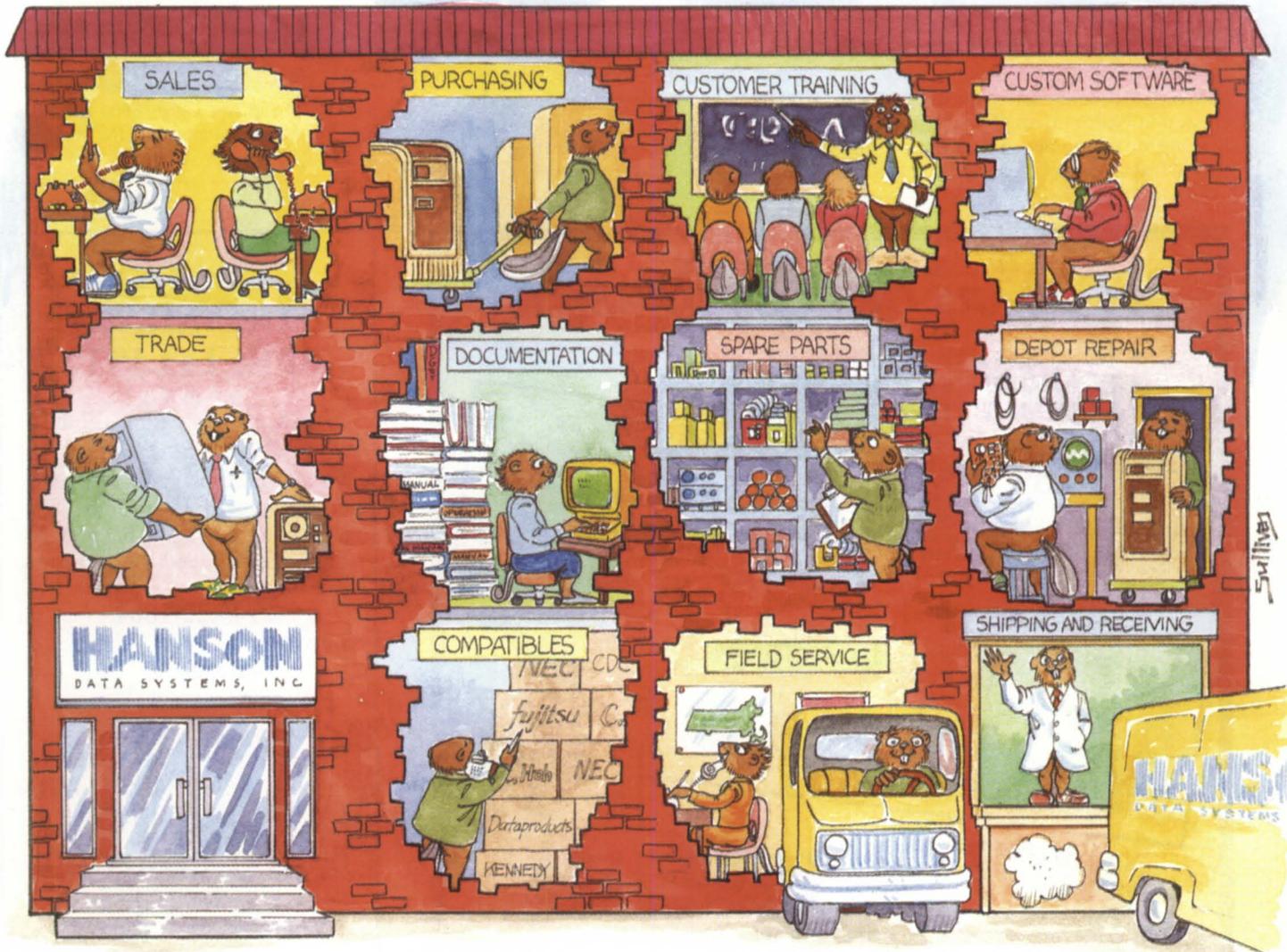
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to access that information. Searching through stacks of index cards looking for prospects who have something in common is a nearly impossible task. However, with a program called "extractions," the user can selectively choose accounts that have one or more criteria in common. It's possible to target very narrow groups. For instance, if hospital administrators were planning a fund drive for a new cardiology unit, and they wanted to target major donors, they might search for all accounts having a history of giving more than \$1,000 and having an interest in cardiology. This feature saves hours of manual searching.

After a target group has been identified by using extractions, an interface with Wordperfect word processing software allows data to be exported into documents created in Wordperfect. Preparing a mass mailing of personalized solicitation letters is fast and easy. Each letter looks as

though it was individually prepared, and personal information can be inserted. Because each letter is printed after the data has been inserted, it doesn't look as though the personal information was an afterthought.

Fund-raising has gotten serious. It's no longer just the ladies' auxiliary holding a bake sale

But soliciting gifts is only half of the process. Fund-raising organizations must keep accurate records of all gifts and pledges received. Fund Master has no limitations on the number of transactions recorded or the length of time they are kept on file. Abundant reports and statis-

tical programs allow in-depth analysis of gifts and campaigns, important for measuring success and useful for planning. A comprehensive file of information about each donor is built, including a screen that summarizes gift activity for the most recent five years, and the first, last, and largest gifts.

Such extensive records that are also easy to access are conducive to soliciting on a large scale. Although PC users might have a few hundred to a few thousand names on file, the typical DG user has from 20,000 to 300,000 names. These larger users raise as much as \$1 million per year in direct mail alone. This wouldn't be possible without a sophisticated computer system. Δ

Joan K. Boyer is the director of communications for Master Software Corp., 8604 Allisonville Rd., Suite 309, Indianapolis, IN 46250; 317/842-7020.

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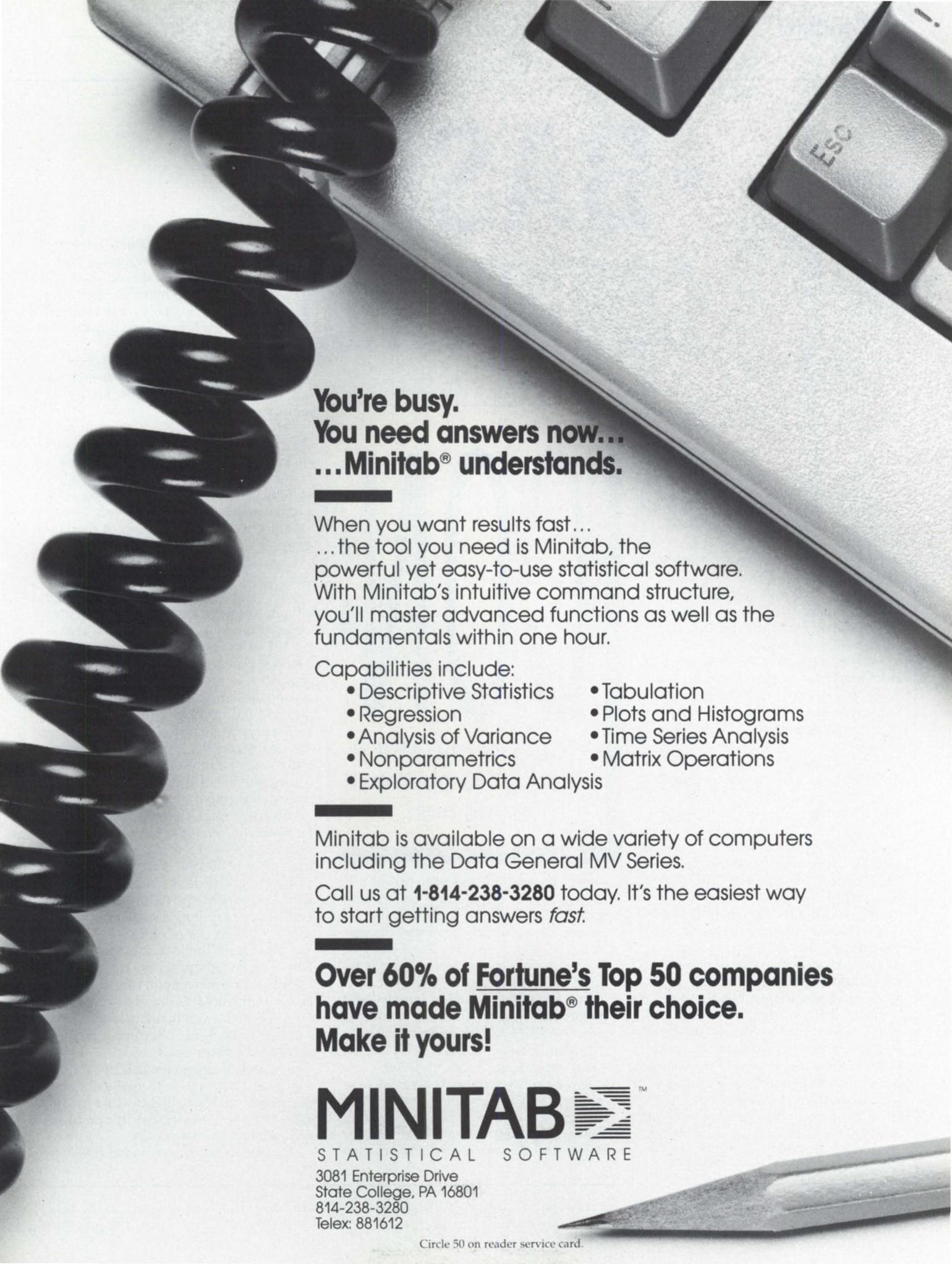
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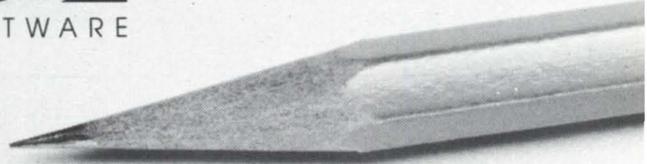
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◆ BASIC ◆ commentary

by Brian Johnson

In the June issue of *Focus*, I summarized the discussion of the AOS[VS] panel that I chaired at the U.K. users group. However, a segment of that column was cut because of a lack of editorial space and because the editor thought my remarks deserved equal time from the BBASIC camp. Anyway, here is the portion of that column as it would have appeared two months ago.

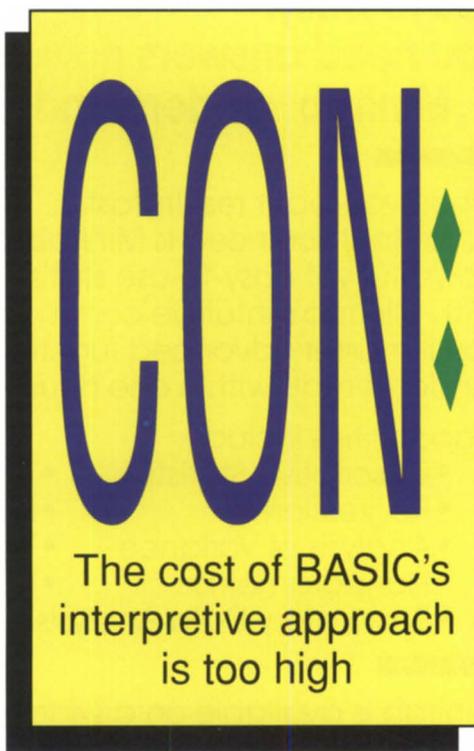
:BASIC

My tangent on BASIC began when one of the attendees at the U.K. users group meeting brought up the subject. During a presentation on how to optimize the system calls and disk I/O of applications software, I characterized BASIC as a "sleazy language."

During the panel discussion, one of the attendees asked me to reconsider the remarks I had made about BASIC in light of the fact that several of the attendees had recently become members of the local DG community by virtue of buying third-party, BASIC-based AOS[VS] systems, and my remarks might have been construed as reflecting poorly on their system suppliers.

The same person also began his remarks by intimating that I'm a die-hard COBOL programmer and therefore would find it hard to say anything good about any other language used for commercial applications. He also speculated that I'm opposed to BASIC because it fosters the use of GOTOs. Nothing could be farther from the truth; I love GOTOs. Especially in place of the stupid things like DO WHILE (1 = 1) that structured code zealots would have us use to avoid them.

I don't know where this person got his information about my language preferences, but I'm not a big COBOL fan either. I find COBOL's clumsy THEN/ELSE matching syntax annoying, and the wordiness drives me to distraction. I use COBOL occasionally, primarily for its easy access to INFOS and its straightforward screen-handling extensions, but I prefer PL/I for commercial applications with complex computational logic. I also use Fortran 77 (RATFOR, actually) for nu-



meric applications and system utilities, but I'm slowly switching over to C and giving up on RATFOR. I use assembly for my software products, primarily because of the problems associated with paying DG's runtime license fees; it would require that I triple the price of my software.

Try as I might, though, I simply can't find it in my heart to retract my comments about BASIC. And I'm not referring just to the various flavors of DG BASIC: I am an equal opportunity BASIC-despiser.

Before I give you the reasoning that I use to support my bigotry, let me preface it by saying that I deal in advice and opinion. That goes for this column. That goes for the advice I give to my consulting clients.

That goes for the products I sell. You should treat the advice and opinions that I offer the way you treat advice and opinions from anyone else: take what's helpful or informative and ignore the rest.

Now, on with the BASIC-bashing. My dislike for BASIC can be summed up

simply.

- The original design of the language done at Dartmouth in the 1960s focused on a lean syntax to allow a short learning curve by nontechnical users. My understanding is that the interpretive approach was taken to enhance debugging and to simplify the implementation of the language.

- Any interpreter makes a trade-off of debugging ease versus execution efficiency. This is appropriate for small, simple, throwaway programs that process tiny amounts of data from a Chemistry 101 lab experiment. It's inappropriate for large packages of production software that may be executed millions of times during its lifetime. Think of it this way: if you are the developer of a production software package, and you choose to write it in an interpretive BASIC, you are essentially paying zillions of extra CPU cycles during the life of the package just to reduce debugging time.

- In order to make implementing BASIC as simple as possible (or because they weren't proficient at using symbol tables), the authors of BBASIC, Kemeny and Kurtz, chose to limit variable names to a single letter, or a single letter followed by a digit. Unless you're writing a small program to display the results of Ohm's Law ($LET V=I*R$), I can't think of a better way to ensure unreadable programs than to make the selection of meaningful variable names nearly impossible. This and other restrictions were removed in many later implementations of BASIC, but that's another problem. Read on.

- The lack of any notion of scope for the use of variables makes all but the simplest of subroutines (GOSUBs) treacherous. As subroutine nesting increases, the problem is compounded enormously.

- For some reason, every person that has

implemented BASIC (especially those on PCs) felt compelled to extend the language in some bizarre way that's incompatible with every other implementation. It's almost as if there was a grand prize for the wildest extensions. Finally, an ANSI standard for BASIC was approved and published. What percentage of BASICs adhere to it? Pitifully few. How portable is the average BASIC program? Even between two different BASICs on the same machine, portability is almost nonexistent. Between two different manufacturers' machines, portability problems are compounded because of the inevitable reliance on cryptic, machine-dependent, built-in functions.

- The development of Business BASIC by TAC back in the 1970s provided a quasi-standard BASIC for business applications by virtue of the fact that the developer of the language set the standard. Then the developer went out of business.

- As a result of most interpretive implementations, programmers quickly realized that adding comments to their programs carried a severe penalty, since the comments were stored as part of the program, and a single comment line could easily consume the same storage as 20 lines of code. This caused programmers either to avoid comments or to store the comments in a separate file, rendering them practically useless. Unfortunately, using comments sparingly isn't what you want to teach beginning programmers, so this particular aspect is probably a failing on the part of Kemeny and Kurtz, although I suspect that they would argue that they never intended for schoolchildren to write programs so large that the comment content would have an impact on the maximum program size.

- The use of BASIC seems to foster a gimmick mentality. I suspect this arises from the need to overcome the limited syntax of the language. I've seen quite a few BASIC programs where the actual logic was completely hidden by a seemingly endless series of calls to obscure built-in functions and assembly subroutines.

- Back in the days when the only choice for developing multiuser systems on DG machines was either BASIC or multi-tasking Fortran, BASIC provided a clear advantage. This also explains how DEC's RSTS operating system lasted as long as it did in the face of RSX-11 and VAX/VMS. AOS and AOS/VS have been with us for almost 12 years, so the multiuser facility is no longer an excuse for BASIC.

- Some developers have argued that

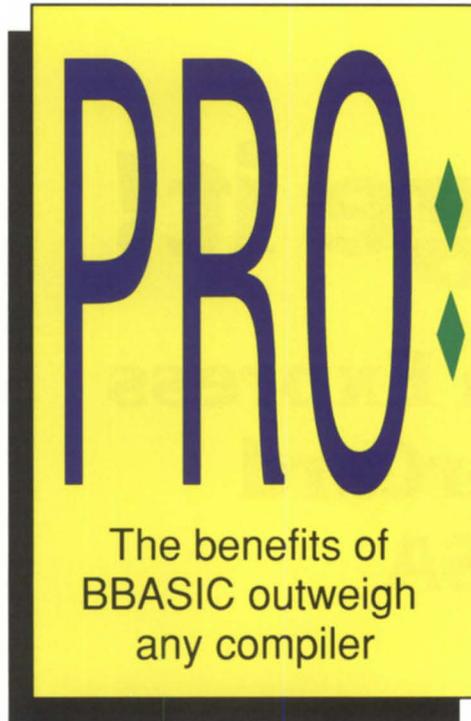
interpreters are much less memory-intensive than other multiterminal solutions. That's true, but memory is far less of an issue these days. And even if memory was the sole determination, my choice would be ICObOL over BBASIC for the reasons I've given. Additionally, many developers are now switching to 32-bit compiled BBASIC in an effort to speed up their software. In the process, most, if not all, of the memory advantage is lost.

- I have actually met a competent BASIC programmer or two. It really is possible to write a well-structured, well-commented, easy-to-maintain program in BASIC. Possible, but not very easy. And not a very

common occurrence.

I have said this many times verbally, and I'll say it again in print: the use of BASIC to teach students to program should be a felony, and its use by adults should be banned. I can't find any redeeming virtue in the language or in its various mutations that makes up for the bad programming habits it encourages. Teaching sex education using porno films makes more sense than teaching computer programming using BASIC.

So there. Please address all hate mail to "I Love BASIC" at the address given below. If you don't mark it, then I might accidentally read it. Δ



by George Henne

For the most part, they're enthusiastic. Sure, they admit the language has a few warts (what piece of software that's been around for 15 years doesn't?), but they wouldn't dream of switching to anything else.

To be fair, most of B.J.'s comments are directed toward BASIC in general, a language that was not designed for the types of things it's used for today. Unfortunately, his misconceptions are held by many others who also haven't taken a close look at Business BASIC.

Business BASIC has only a passing resemblance to the original language. It has an incredible number of extensions, all added with applications programming in mind.

For example, Business BASIC doesn't restrict programmers to just one letter and a number for variable names. It never has.

Many of these enhancements aren't consistent with the ANSI BASIC standard, but because the standard was developed a decade after Business BASIC first came out, it's impractical to implement retroactively. Nobody else pays much attention to the ANSI standard.

Another chestnut in B.J.'s tirade is the lack of performance of interpreters. I thought this one was long dead. BBASIC and B32, along with most other high-performance BASICs, can only be called interpreters because the programmer doesn't have to sit through lengthy compiles. Internally, the format is something called threaded p-code: each statement is translated into an optimal list of subroutine calls as it is typed in. On execution, these subroutines are executed one after another, without any interpretation being performed.

When the editor of *Focus* leaked word to me that B.J.'s next column was going to be a hatchet job on BASIC, I couldn't believe it. What had I ever done to deserve this?

Luckily, I saw an advance copy of his column, and I felt a lot better. This time, I've caught B.J. without the facts. B.J., you ignorant scooter trash, the following must be said.

Business BASIC has been one of DG's best-selling languages for many years. It's estimated that as many as half of DG's resellers use the language. Many sites also do their own programming. No one knows exactly how many users there are, but the number is sure to be in the tens of thousands.

Many "pure" compilers work exactly the same way. Check any textbook on compiler design. This cuts down on the amount of in-line code, and keeps the size of the final compiled code reasonable. (I'm told most DG compilers do a better-than-average job in minimizing extraneous subroutine calls and generating appropriate in-line code.) Proof of this is in the actual production systems: those using

Business BASIC (especially B32) don't seem to have any trouble running at least as many terminals on systems as those programmed in COBOL or PL/I. As to what constitutes acceptable terminal loads on a system, nobody will dispute that BBASIC is much easier on a system than CEO.

For the programmer who has a budget and a deadline (that's most of us), it's hard

to believe anybody could live with a compiler. Most studies place COBOL programming at three to five times as long as the same in Business BASIC. Each line is checked for syntax as it is entered: this saves at least your first two compiles, which you don't have to do anyway. The ability to type in three or four lines of code, test them, and then go on to the next results in vast increases to the speed of coding.

Programming in a compiled language ignores the spirit of computing today: why shouldn't the development be as interactive as the final application?

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Judging from the performance of BBASIC systems, I don't see where they're wasting "zillions of CPU cycles" to save some debugging time. In any case, have you compared the cost of CPU cycles versus the cost of programmers lately?

If you want to pick on inefficient CPU-wasters, look at fourth-generation languages!

B.J. also implied that when TAC (the original author of BBASIC) got out of the business, the language was reduced. In fact, DG took over the language a couple of years before TAC gave it up, and has done quite well with it. The language continues to have a healthy growth and evolution, with B32 being its latest and greatest edition.

Applications in BASIC may be more portable than B.J. realizes. Rehosting just the interpreter (a large, complex program to be sure, but not nearly as bad as most applications systems) is often all that's needed. Code written for BASIC/Four systems runs on virtually any type of

computer today. DG's Business BASIC has been hosted on MS-DOS, SuperDOS, and Unix, so far.

B.J. is right when he said that BASIC programmers did little in the way of comments in the early days. The small size of BASIC programs that allowed them to run efficiently on small systems made the overhead of comments expensive. The choice would have been not to write the application at all, which isn't much of a choice.

This is no longer true. Ten years ago, on an unmapped Nova running RDOS, we kept our programs under 8 KB. These days, we're allowed up to 512 KB. There's no excuse for not putting in comments. Even with comments, a BBASIC program still takes up a lot less space than a compiled COBOL program. If you still have doubts, B32 allows you to STRIP the comments on a runtime version of the program with a single statement.

B.J. also claims the limited syntax of BASIC leads to a gimmicky style of programming. I'm not sure what he means about limited. Statements that do just about anything have been added during the years. The problem is to choose the ones that lead you most clearly to the desired result. Most other languages don't give you that choice.

I don't think BBASIC programmers write any worse code than other groups. There's been an incredible amount of BBASIC code written over the years, some of it brilliant, some of it unbelievably bad. It's a question of good programmers and bad programmers. Any heavily used language will get its share of both.

Besides, when it comes to languages in DG land, we don't have a lot of choice. Business BASIC is still the best for developing business applications. COBOL is ancient, restrictive, slow to program, and verbose. Nobody uses PL/I anymore, Fortran is no good for business applications, and C is worse.

By the way, I'm not accusing B.J. of being a supporter of COBOL. I'm sure his comments would be just as entertaining about that language.

Ultimately, we programmers are in business to make a computer work for somebody else. It's our responsibility to do so in the best possible way. This means getting the job done on time, within budget, and in a way that it can be maintained. These objectives are hard enough

that we shouldn't be crippled by the language we work with. Having to wait for compiles to complete is crippling. Having to stick with a committee standard set 20 years ago is crippling. Having to debug from core dumps is crippling.

Business BASIC gets the job done. It's constantly being upgraded; features that users have come to expect from their micros (like windowing) now exist in B32.

B.J. doesn't read anything with the word BASIC on it. That's too bad. If more people would learn more about the language, perhaps they'd realize what makes it so good, and give us some rational alternatives to develop in. Until then, I'll stick with BBASIC.

In the meantime, I'm soliciting contributions to the "Re-educate B.J. Fund." Please help! Δ

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George Henne and Brian Johnson are both contribution editors to Focus.



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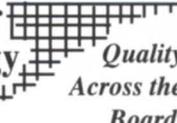
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◆ B.J. ◆ REPLIES

Dear George,

First of all, my comments were aimed at BASICs of all sorts, not just BBASIC. BBASIC's popularity doesn't mean much: the best-selling car in the U.S. is one that I wouldn't be caught dead driving.

The cavalier attitude of (B)BASIC users with respect to standards is yet another example of the mentality of its proponents.

The B32 compiler is a relatively recent addition to the BBASIC scene, and may be the salvation of the language with respect to its appalling performance. However, I'd wager that the majority of (B)BASIC end-users are still running interpreters, and will continue to run them.

I don't know what you call a current book on compiler theory, but I'm afraid you're out-of-date with respect to current compiler technology; few compilers (except for those on PCs and some of DEC's) use the threaded code concept anymore. For example, I just compiled the demo programs provided with DG's COBOL and printed the generated code. All the generated code was in line, except for a call to COBINIT at the beginning, a call to COBSTOP at the end, and the I/O statements. I've witnessed similar results for all other DG-compiled languages, except Interactive COBOL and RPG. Nice try, though.

I'm afraid your arguments about programming time and programming budgets fall on deaf ears. I'll stick with my original statement: the use of an interpreter by a supplier of application code in effect says that the developer values the development cost more than the customer's long-term execution cost. Purchasers may be swayed by functionality, but they are quickly disenchanted by appalling performance after delivery.

Large programs that take an inordinate time to compile are poor programming practice anyway. Modern programming methodology dictates small, separately compiled modules, rarely more than a few pages in length. (B)BASIC fosters large programs because of the inefficiencies associated with ENTERING a subroutine at execution time. That's why (B)BASIC programs tend to be huge; (B)BASIC programmers have a GOSUB mentality, and they carry that over when they try to write in a real language.

With the advent of shared libraries and inner-ring libraries, development using LANG_RT-based languages is now extremely fast both in compile time and LINK time, the .PR files are tiny, and the runtime code sharing between dissimilar .PRs is wonderful, so I don't buy the "fast and small" argument anymore for (B)BASIC.

I disagree with the ease-of-porting issue. Every (B)BASIC program I've seen contains numerous direct calls to take advantage of operating-system-specific facilities. Just review a few of your own columns and those of other (B)BASIC columnists during the past few years for examples. The most portable languages are Fortran and COBOL because of their fully specified I/O syntax and rigidly defined data types. (Aside: C is one of the least portable!) That doesn't mean I'm particularly fond of them either; it's just a fact.

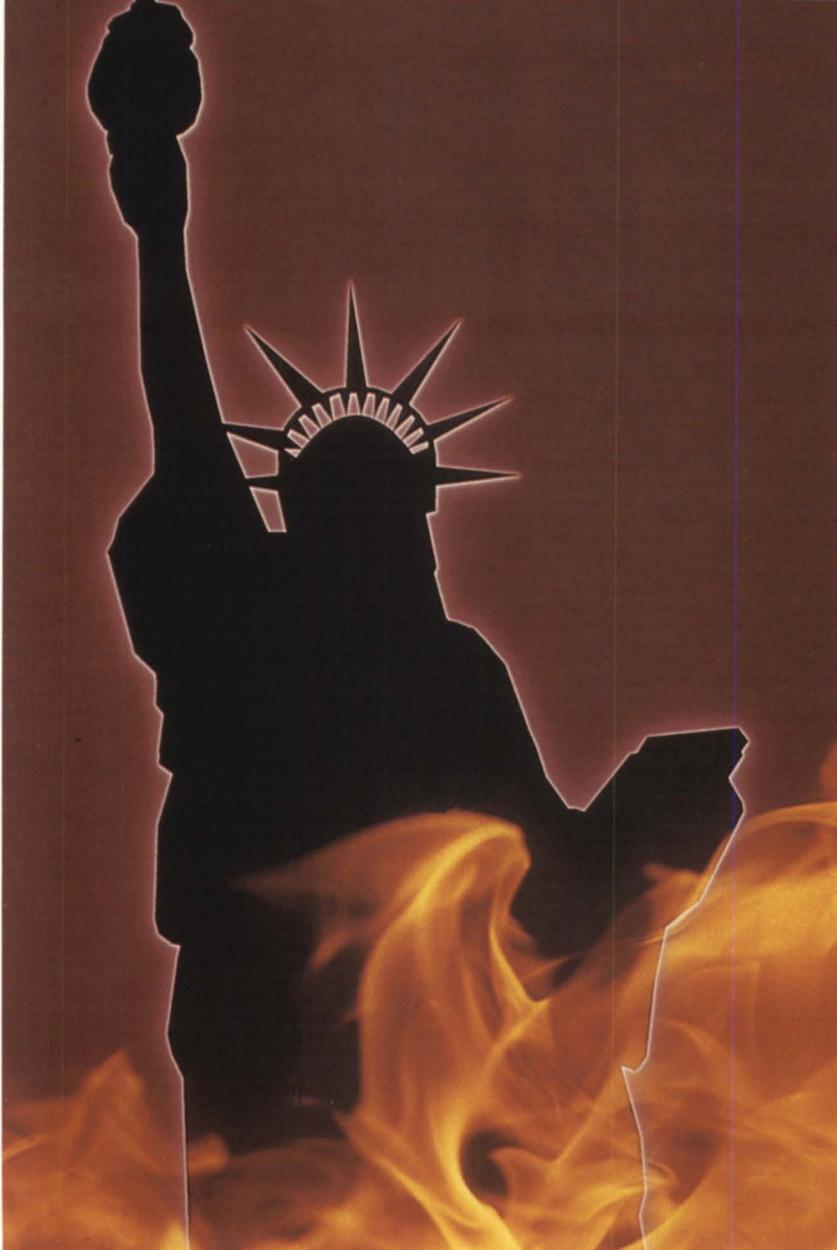
Debug from core dumps? Please, George, tell me you're kidding. You really haven't used interactive debuggers like SWAT? Get serious.

Of course, there's a lot of atrocious code around. But it's easier to write hard-to-read/maintain code in (B)BASIC—almost as easy as it is in C.

Overall, it was a nice try, George.

Your Pal,
B.J.

△



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Measuring up

You can test your new revisions of CEO using these criteria

When a new revision of CEO is released, many users test certain functions of the new revision, or test old bugs to see if they're fixed in this revision. Some installations are lucky enough to have evaluation systems to load

the product, while others run a dual copy of CEO

alongside their working copy. Whatever method you choose, these are items that should be tested early to ensure proper functionality.

With the help of OASIS (NADGUG's Office Automation Special Interest Subcommittee), we have compiled a checklist for testing new revisions. This came from the effort of recent attendees at the OASIS CEO workshop held in Washington D.C. I want to thank all those that contributed and especially the Data General employees who had significant input.

Mail functions

- send/receive messages
- send/receive messages across network
- send message via mailing list
- create mailing lists
- view inbox of another user
- send/receive documents
- send/receive documents across network
- view mailed document
- file mailed document/message
- reply to message
- forward message
- delete message
- print message/document
- re-mail rejected message
- check spelling in message
- restore shredded messages
- methods of selecting entries
- indexing on username
- all options (urgent, file, etc.)
- multiple forward, replies, etc.
- mail all types of documents (e.g., GKM, LIST, etc.)
- co-ownership of inbox (security)
- file/mail folders
- layered mailing lists

Filing functions

- create personal drawers
- create private drawers
- create folders
- create documents
- use the Search facility
- retrieve/print/view documents in waste-basket
- create/view keywords

- import document from AOS/VS
- import document from the PC
- export document to the PC
- access the public cabinet
- archive documents
- restore archived documents
- move/duplicate documents
- delete documents
- share drawers
- convert document types to different types
- shred documents
- access public documents

Calendar functions

- insert calendar entries
- change display (e.g., day/week/month-at-a-glance)
- schedule meetings
- cancel meetings
- reschedule meetings
- check status of meetings
- make additions to meeting lists
- confirm/decline meetings
- print calendar
- create reminder/things-to-do
- schedule/cancel recurrent sessions
- background scheduling
- remote scheduling
- holidays
- creating resources
- access Interrupt

CEO manager functions

- add/delete/modify a user (with verification)
- generate the user directory

- add/delete words to the site dictionary
- set holidays
- create/delete printer definitions
- run public applications
- mandatory archiving
- start/stop each of the CEO servers
- create new CEO_GEN configuration

Miscellaneous functions

- access on-line help at multiple levels
- access Interrupt at multiple levels
- user migration utility
- calculator
- global user commands working properly
- modify macros where necessary
- check CEO backup macro
- include CEO_SNA directory in backup macro
- read release notice
- check interfaces to other systems
- test error conditions
- test previously known bugs

Notes

1. Don't overwrite the site dictionary.
2. Get rid of garbage on system prior to upgrade.
3. Obtain printout of current CEO configuration. Δ

Charlene A. Kirian is an account executive for Intercon Associates, 1580 Winston Rd. S., Rochester, NY 14618; 716/244-1250.

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Swapping and chaining

Using IPC messages can keep long programs from becoming a problem

First, a correction. In the source code for EBCDIC_TO_ASCII.SR (June 1987 issue of *Focus*). Instead of:

```
table: .+1*2
```

it should have read:

```
table: .+2*2
```

Only one person called me about it and that was just last month, so I guess the typo didn't create any huge problems.



Stack overflow. What now? In AOS, it means you've reached the end of your leash, but in AOS[VS], you just reLINK with a higher value of /MTOP=n. Actually, even in AOS, you aren't beaten. You can easily segment your program into overlays and relink it and/or split the large program into several smaller programs and then tie them together by swapping and/or chaining. Of course, this assumes that the program is too large because of the amount of executable code it contains. If you require more array space, these techniques may only allow you to gain a little more. Although multiple programs may require that intermediate data be passed among programs via shared or unshared disk files, the technique can effectively extend your address space without bounds.

Even AOS/VS users can benefit from splitting a program into several smaller programs, because the individual programs can be treated as tools that are then invoked by swapping or chaining from one of several driver programs. Each driver program can combine these utility programs in a different way. This is just an extension of the use of separately compiled subroutines/procedures within a program. If the programs are designed to obtain their options and input/output file specifications entirely from the CLI command line, then they may be treated as procedures that are "called" from the driver program.

My START_PROGRAM routine (see Figure 1) has a simple calling sequence and allows you to not only swap or chain to another program, but also pass it an optional IPC (Inter-Process Communication) message. Note that most of the slots in the ?PROC packet are data-initialized with -1 (i.e., use the current or default value). At offsets ?PDIR and ?PDIR+1, however, I use 0

Figure 1: START_PROGRAM

```
subroutine START_PROGRAM(program_name,mode,message)
implicit none

include      "qsym.f77.in"          !ISYS_ replaced by ?
character*(*) program_name,mode,message

integer*2    pkt(0:?plth-1)/?plth*-1/
integer*4    ba_program              !b.a. of program
integer*4    wa_header               !w.a. of header
equivalence (pkt(?psnm),ba_program)
equivalence (pkt(?pipc),wa_header)

integer*4    ac0,ac1,ac2,ier
integer*2    header(0:?iplth-1)      !IPC header (0:7)
integer*4    wa_message              !address of message
equivalence (header(?iptr),wa_message)

character*256 temp_name               !pathname?
character*2048 temp_message
integer      l_message,i

integer*4    isys                    !F77 intrinsic

c>>>begin
c-->set up message with at least 1 & maybe 2 nulls
if(len(message).gt.len(temp_message)) then
    stop "IPC message too long"
end if
temp_message=message
l_message=index(temp_message," ")
temp_message(l_message:l_message)="<0>"
if(mod(l_message,2).ne.0) then
```

(continued)

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AOS[VS] TRICKS

```

l_message=l_message+1
temp_message(l_message:l_message)="<<0>"
end if
c—>you can add an uppercase routine here so the user
c doesn't have to worry about using uppercase only
c call UPCASE(temp_message(1:l_message))

c—>initialize packet for IPC header
header(?isfl)=0 !no system flags
header(?iufl)=?gfcl !cli format
header(?idph)=0 !msw dest. port
header(?idpl)=0 !lsw dest. port
header(?iopn)=0 !origin port no.
header(?ilth)=l_message/2 !length (words)
wa_message=wordaddr(temp_message) !address of message
c—>get program name and append null
temp_name=program_name !make copy
i=index(temp_name," ") !find first space
temp_name(i:i)="<<0>" !replace with null

c—>chain or swap?
if(mode.eq."chain".or.mode.eq."CHAIN") then

c...close all but @output in case need to list error
do i=0,255
if(i.ne.6.and.i.ne.10) then
close(i) !close/flush buffer
end if
end do

ac0=byteaddr(temp_name) !bp to pathname
ac1=2k !flush IPC, no debug
if(l_message.eq.0) then
ac2=0 !no IPC message
else
ac2=wordaddr(header) !address of header
end if

ier=isys(?chain,ac0,ac1,ac2)

else

pkt(?pflg)=?pfex !block caller (swap)
ba_program=byteaddr(temp_name) !bp to program name
if(l_message.eq.0) then
wa_header=-1 !no IPC header
else
wa_header=wordaddr(header) !IPC header address
end if
pkt(?pdir)=0 !current directory
pkt(?pdir+1)=0
pkt(?pwmi+1)=0 !reserved

ac0=0 !reserved
ac1=0 !reserved
ac2=wordaddr(pkt) !?proc packet
ier=isys(?proc,ac0,ac1,ac2)

end if

if(ier.ne.0) call errcode(ier) !list error & die

return
end

```

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instead of -1 so that the program will start up in the current directory, rather than in the initial working directory of the calling program. Normally this distinction is unnecessary, but if the calling program changes directories (with ?DIR) and creates files, the second program will not be able to find them unless it also starts up in the current directory. While I'm on the subject, you should also change the -1 to 0 at the same two offsets in your CLI subroutine (see the July 1986 issue of *Focus*). This allows you to start up a CLI process in the current directory (which might be the initial directory) and makes it a more useful routine for programs that change directories.

Notice that I have appended at least one null terminator to the IPC message; a second null is added if the length is odd. (IPC message lengths are specified in words, i.e., an even number of bytes.)

Now here's a subtle point. AOS[VS] will close all AOS[VS] channels and flush buffers before a ?CHAIN. This is fine, except that Fortran 77 does its own buffering, and a Fortran I/O operation may not have a corresponding ?READ/?WRITE operation. In fact, there probably has been no ?WRITE during the entire program, and therefore, AOS[VS] will think there is nothing to flush when it encounters ?CHAIN. It is important to close all F77 channels to flush buffers before ?CHAIN. This isn't a problem with swapping, because you will be coming back anyway.

The IPC message you pass to the program will be accessed by ?GTMES and therefore must be in CLI format, i.e., argument 1 is the program name, no spaces anywhere, all uppercase, a single comma between arguments, and a terminating null (or two). This

is the format the CLI uses when it uses ?PROC or ?CHAIN to start up a program in response to an XEQ, EXECUTE, PROCESS, or CHAIN command. When you use START_PROGRAM, you must duplicate this format for subroutine argument 3. The program being started up doesn't really know (or care) if it has been executed from the CLI or from another program. However, if it is coded to read the arguments and switches from the CLI command line, then it will still be able to do that, since START_PROGRAM sends it an appropriate IPC message.

The choice of swap or chain depends on the design of your program

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I'll illustrate the use of START_PROGRAM using SED as an example. SED is coded to read various switches and to get the name of the file from argument 1 of the CLI command line. Here are some simple CLI commands with their equivalent START_PROGRAM calling sequences:

```
) X SED MYFILE
call START_PROGRAM("sed.pr", "swap", "SED,MYFILE")
```

```
) X SED/PROF=ABC FOO
call START_PROGRAM("sed.pr", "chain", "SED/PROF=ABC,FOO")
```

Regardless of whether you choose to swap or chain to the program, you can do so with or without an IPC message. If you have no particular message to send to the program, simply code the program name (in uppercase).

```
) X PED
call START_PROGRAM("ped.pr", "swap", "PED")
```

The choice of swap or chain depends on the design of your program—whether or not you want to return to the calling program for further processing when the second program terminates.

Consider the flexibility and power embodied in this technique. You now have the capability to write programs that use other programs as callable procedures, provided the other programs are coded to read the CLI command line. The parameters passed

to the procedure can be any combination of arguments and switches. Simply build an appropriate IPC message in the correct CLI format and swap to the program. You can write various utility programs to process files (filter, sort, invert, plot, or any other operation you have in mind) and then write driver programs that call these programs in various combinations.

On the other hand, if your utility programs are coded to prompt for options and filenames, then it's difficult to use them as objects in a multiprogram environment. In order to call these programs as noninteractive procedures, the first program would have to create a script file of responses to the questions and then write a subroutine similar to START_PROGRAM, but using ?PROC to emulate the PROCESS/INPUT=<filename> CLI command and taking input from the script file. It's much cleaner to send an IPC message containing the options and filenames. In addition, while you can ?CHAIN to another program and send it an IPC message, you cannot ?CHAIN with a different input file, i.e., there is no CHAIN/INPUT=<filename> equivalent.

While the subject of swapping and chaining may be familiar to many of you, this article serves as a basis for next month's topic: inter-process obituary messages. Δ

John A. Grant is a geophysicist with the Geological Survey of Canada, where he manages the Exploration Geophysics Subdivision's MV/4000. He may be contacted at 601 Booth St., Room 591, Ottawa, Ontario K1A 0E8; 613/992-1082.

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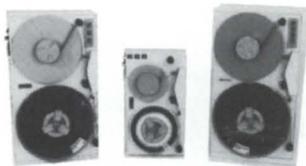
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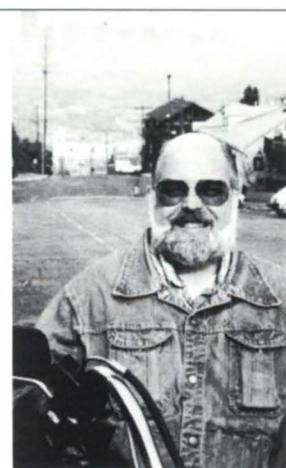
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Getting it all down on paper

Sometimes it takes a bit of adjusting to configure your printer right

PTSIG:AGAIN

Last month, I described a method for handling nonstandard spooled printers under AOS/V5. I hadn't intended for the subject of printer configuration to become a miniseries (ha ha), but it's starting to look like that's what's going to happen.

This month, I'm going to recount the thinking that occurred when we hooked up our first laser printer last year. With any luck, you may gain a little insight into some alternative ways of handling spooled printers.

Figure 1: DEFINE_PORTS.CLI fragment

```
DELETE/2=IGNORE/V :PER:LJ11
CREATE/LINK :PER:LJ11 CON22
```

:THE_SITUATION

I use Wordperfect for all of my word processing needs, and I got tired of the noise and slow speed of my trusty old NEC 5515 printer, so I decided to invest in a little of the latest laser technology. I felt

kind of bad getting rid of the NEC; it had performed almost flawlessly for the last eight years, which has to be some kind of record.

Anyway, I popped for an HP Laserjet series II along with a collection of Times Roman and Helvetica downloadable fonts. The results have been so good that all of the old impact letter-quality printers on the system have been replaced with HP lasers too.

Figure 2: SET_PORT_CHARS.CLI fragment

```
ASSIGN @LJ11
CHARACTERISTICS/DEFAULT/HARDCOPY
@LJ11
CHARACTERISTICS/DEFAULT/CPL=80/LPP=66
@LJ11
CHARACTERISTICS/DEFAULT/NAS/OFF/ST
@LJ11
DEASSIGN @LJ11
```

Figure 3: LQP1_UP.CLI

```
[!EQUAL,[!PATHNAME :PER:LQP1,]
COMMENT Queue doesn't exist: create and open it.
CX CREATE PRINT LQP1
CX OPEN LQP1
[!END]

CX START LQP1 @LJ11
PAUSE 3.000 ; COMMENT Allow time for EXEC to PROC XLPT
CX SILENCE @LJ11 ; COMMENT Kill the pesky messages
CX HEADERS @LJ11 1 ; COMMENT Many users use the printer
CX EVEN @LJ11 OFF ; COMMENT Not a fan-fold device
LQP1 PAPER DRAFT ; COMMENT Default to DRAFT mode
```

Getting the lasers to work properly with AOS/V5 and XLPT was not exactly a cakewalk, as last month's column showed. Once the initial problems with the /WRP and /NAS characteristics were identified and resolved, the next step was to decide how the printers would be configured, managed, and used. This month's column details that effort.

:THE_SPECS

To a great extent, how the printers are handled depends on what they will be used for. I can't describe a case that is appropriate for everybody, so I'm going to describe the way my co-workers and I use our laser.

Before diving into the gory details, let's look at the general principles that governed our thinking when confronted with two or more ways to accomplish the same thing.

Spec 1: Any customization of the printer should be minimal; ideally, I'd like to leave the printer settings as close to the factory defaults as possible. That way, if the printer

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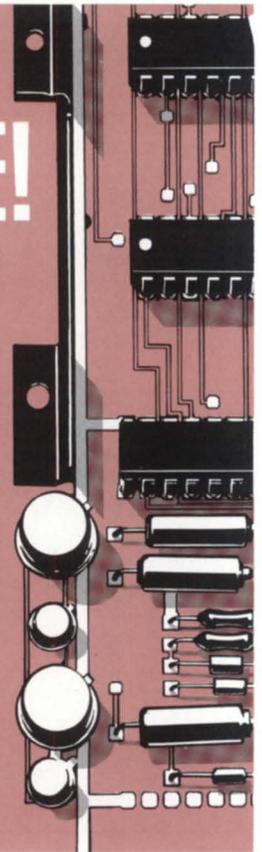
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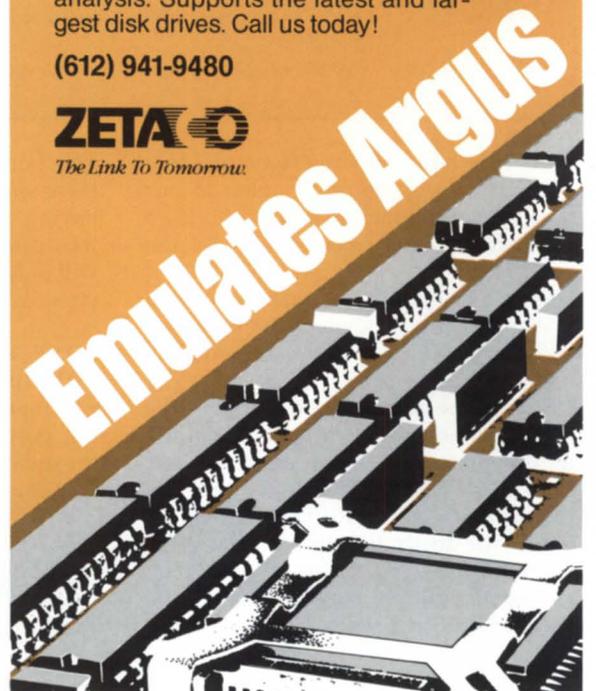
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Figure 4: LPQ1.CLI

```
[!EQUAL,%1%,]
WRITE
WRITE Usage:,%1% RESTART
WRITE,,,,or:,%1% PAPER paper-type
WRITE
WRITE Where paper-type is one of the following:
WRITE
WRITE,,,,Paper,,,,Margins,,,,Printable,Forms
WRITE,,,,Type,,,,left right cols rows,file
WRITE,,,,,-----
WRITE,,,,DRAFT,,,,1" ,1/3" ,80 ,63 , -none-
WRITE,,,,FORM,,,,1/5" ,1/3" ,80 ,57 ,LJIIFORM
WRITE,,,,LPT,,,,1.5" ,1.4" ,135 ,63 ,LJIILPT *
WRITE,,,,WPLH,,,,WordPerfect does it,,LJIIWPLH
WRITE,,,,WPSS,,,,WordPerfect does it,,LJIIWPS
WRITE
WRITE * indicates Landscape orientation
WRITE
[!ELSE]

[!EQUAL,%1%,RESTART]
CX PAUSE @LJII1
CX RESTART @LJII1

STRING [!READ Hit NEW LINE to when ready]
CX CONTINUE @LJII1
[!ELSE]
[!EQUAL,%1%,PAPER]
[!EQUAL,[!PATHNAME :UTIL:FORMS:LJII%2%.BCU],]
WRITE No such paper-type: %2%
[!ELSE]
[!EQUAL,%2%,DRAFT]
CX FORMS @LJII1
CX CPL @LJII1 80 ; COMMENT DRAFT needs this because it
CX LPP @LJII1 66 ; COMMENT has no associated FORMS file
[!ELSE]
CX FORMS @LJII1 LJII%2%.FRM
[!END]
CX BINARY @LJII1 LJII%2%.BCU ; COMMENT Everybody's got one
CX CONTINUE @LJII1 ; COMMENT Stand back. . .
[!END]
[!ELSE]
WRITE Unrecognized command: %1%
[!END]
[!END]
```

Figure 5: LJII_TEXT.TXT

Laserjet series II cleanup file for DRAFT paper

```
<ESC>E Flush any partially printed page, reset the printer to its default configuration
<ESC>&a8L Left margin at column 8 (0.80" at 10 cpi): this plus the 1/5" physical margin
= 0.966" (close enough to an inch)
<ESC>&i3E Top margin at physical line 3: the combo of this and XLPT's 3 line top margin
will result in a 3/6" + 3/6.85" = 0.94" margin (close enough to an inch)
<ESC>&k10.75H 10.75/120" HMI produces 11.17 cpi, which in turn allows 80 printable
columns
<ESC>&i7C 7/48" VMI produces 6.85 lpi, allowing 66 lines before the physical bottom
margin
<ESC>&66L Set the printable page length to 66 to disable the default bottom 1/2" margin
```

needs to be replaced, I don't have to worry about changing the replacement to our nonstandard settings. In my case, the laser was left absolutely stock except for the baud rate.

Spec 2: The printer should be accessible to Wordperfect users, interactive users (via QPRINT), and applications software (via opening the queue).

Spec 3: The default mode should be the most common paper type based on the most common use of the printer. In our case, that's 80 columns by 63 printable rows (i.e., 66 physical lines) using junk bond (we do draft printing more than anything else—practice makes perfect).

Spec 4: Multiple paper types will be used (letterhead, plain bond, glossy bond,

junk bond, attaboy certificates, etc.), and there should be some protection against having a job print on the wrong paper. Jobs printed without a /FORMS switch will only print if junk bond is the current paper type.

:STEP_1

The first order of business is to pick a port for the laser and configure it properly (all ports are VSGENed identically—to the default).

In our shop, there's a rule that only one macro can reference parallel printers and serial ports by their @CON name. It's invoked by the UP macro, and it's called DEFINE_PORTS.CLI. Its job is to create generic LINKs that point to the particular

ports used this week for printers. That way, only one macro needs to be changed when a parallel printer is moved to a different controller or when a serial port is reassigned. The device name "LJIII" was selected for the Laserjet series II. The fragment of DEFINE_PORTS.CLI that creates the LJIII link is shown in Figure 1.

The UP macro also invokes a second macro that takes care of setting any non-standard serial-port characteristics. It's called SET_PORT_CHARS.CLI, and the fragment of it that handles LJIII is shown in Figure 2. Note that /ST is turned off to take advantage of the fact that the laser's default tabs match those used by AOS[/VS]. This reduces the CPU consumed by XLPT slightly when printing files with lots of tabs (like source files and compiler listings) and reduces serial-port traffic.

Note that both of these macros are only referenced by UP.CLI.

:STEP_2

The next order of business is to make a macro that can be used by the system manager to start the spooler cooperative for the printer queue. A simplified version of the macro we use is shown in Figure 3.

First, the macro checks to see if the queue (LQP1) already exists. If it doesn't, it creates and opens it.

Next, the ACL of the port is set to allow the port to be controlled by the nonprivileged users who actually manage the printer. Alas, this wonderful feature is

only available on later revs of AOS/VS. Users of earlier revs will either have to call the OPERator to handle the queue, or give everybody CHANGE USERNAME privileges. Yech!

Next, a spooler cooperative is STARTed, and the various default device options are set (SILENCE, HEADERS 1, EVEN OFF, CPL.80, LPP66, BINARYLJII_TEXT.BCU).

Finally, the device is CONTINUED to start it processing jobs from the LQP1 queue.

Don't worry about the clean-up file for now; we'll get to it shortly.

:STEP_3

Now we need a macro to take care of the messy details associated with clearing paper jams and changing the paper type currently installed in the printer. The command line format for the macro is simple:

```
) LQP1 RESTART
```

or

```
) LQP1 PAPER paper-type
```

If no arguments are provided, then the macro describes itself.

In the case of a restart, the macro pauses the device, restarts the current job, and waits for a NEWLINE before continuing the device.

In the case of a paper change, the macro PAUSEs the device, changes the binary clean-up file, specifies the forms file, and then continues the device.

The forms files are needed to keep users from printing on the wrong kind of paper. The forms files themselves are relatively simple to set up: just create an empty file for each one and use FCU to set the page shape (columns and rows). Default everything else, especially the default tab positions (remember, we did a CHAR/OFF/ST in SET_PORT_CHARS.CLI).

For our shop, the paper types are:

type	Paper Margins		Printable		Orient	Forms
	Left	Right	cols	rows		
DRAFT	1"	1/3"	80	63	Portrait	none
FORM	1/5"	1/3"	80	63	Portrait	LJII2FORM
LPT	1.5"	1.4"	135	63	Landscape	LJII2LPT
WPLH	Wordperfect controls this					LJII2WPLH
WPSS	Wordperfect controls this					LJII2WPSS

DRAFT is the junk bond paper used for printing drafts. FORM is used for printing forms destined for typewriters (more about this next month). LPT is used for line printer output printed sideways. The last two paper types are letterhead and second sheet.

A simplified version of the LQP1.CLI

macro is shown in Figure 4. This macro is intended as the primary means for both users and the OPERator to control the printer.

:STEP_5

Now comes the ugly business of creating the binary clean-up files. I don't know about you, but maintaining clean-up files without resorting to SPEED.PR has al-

ways been a source of annoyance to me. Well, the annoyance finally got the best of me, and I wrote a simple program to handle the problem: CLEANUP.PR.

The program eats an ASCII .TXT file and produces a .BCU (Binary CleanUp) file. In this way, any fool capable of using SED can maintain the clean-up files. And fools seem to be in great supply these days.

Anyway, this must be your lucky day,

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because I'm making the CLEANUP program available. The program is too lengthy to list here, so I've made it available on the :SYSMGR BBS as item AOSVS16: CLEANUP. It's a 16-bit assembly source (I would have written it in BASIC, but I didn't want to run afoul of DG's dreaded runtime license policy).

CLEANUP works on both AOS and AOS/VS.

In a nutshell, the clean-up program works as follows.

1. Each line of the .TXT file is examined for printable characters, and they are written directly to the .BCU file as is, except as follows.

2. If the first character on the line is a semicolon, the line is taken to be a comment and ignored.

3. Processing of a line stops at the first

white-space character (space or any control character, including tab and NEW-LINE). Additionally, processing stops at any character that has its parity bit set.

4. Any sequence of the form "<mnemonic>" for "<octal-number>" is converted to a single-byte value and written to the .BCU file. Standard ASCII mnemonics may be used (see the table in the source program).

A listing of the clean-up file for the laser text paper type, LJII_TEXT.TXT, is shown in Figure 5. It's a good example of how nice clean-up files can look when maintained this way.

:SUMMARY

At this point, we've got the macros in place to configure, start, and manage the laser printer queue and device, and a program to manage the obnoxious binary clean-up files.

I've left a bunch of details unresolved, specifically the content of the various binary clean-up files for the various paper types and how they were determined. That took days of research and testing and will be a column by itself. Stay tuned.

:PCS_REVISITED

My June column described a discussion at the U.K. users group meeting about a few shortcomings of DG's Password Control System. Specifically, the audience was complaining that PCS would allow an irresponsible user to subvert security by reusing passwords. A letter just came from DG telling me that they fixed that problem and a few others in the most recent release. Now the system manager can tell PCS to check as many as 114 of the user's previous passwords before accepting the new one. There are also a few new features you may want to look into if your site is concerned about security.

:SLEAZE_TOUR:PHILLY

This year's Sleaze Tour at the NADGUG national conference may be in trouble. Advance teams have scoured the Philly area and reported a veritable dearth of sleaze bars. I hate to admit it, but we might actually have to go to the baseball game instead. Good grief! Δ

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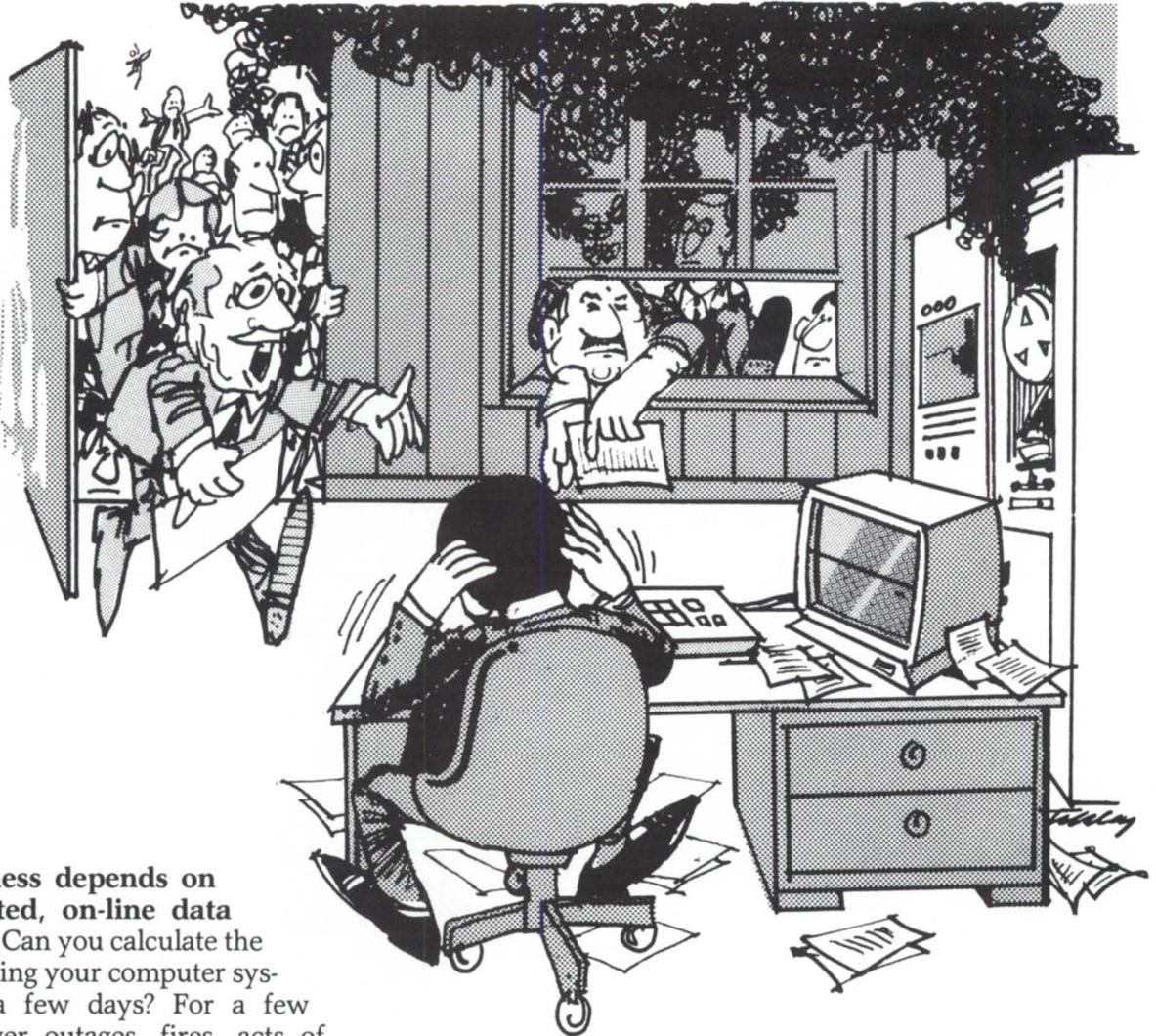


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To Form a More Perfect Union

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issues and ideas

Inspired by the upcoming NADGUG conference in Philadelphia, our intrepid columnist adopts a constitutional theme for this month's installment.

Preamble

Is it summer yet? I still haven't adjusted to the only thing worse than jet lag: magazine deadlines. The kids aren't out of school yet, we haven't picked a destination for our vacation, and I'm working on the August issue, to be published just before the NADGUG conference, which doesn't start until after the kids are back in school.

Those of you coming to the conference this year should drop in on the Disaster Recovery Roundtable. It's my excuse for being there, and who knows, that might be the one session that makes your trip worthwhile. If your plans don't include a visit to the birthplace of the U.S. Constitution, it's not too late to change your mind and show up anyway (although I admit August isn't the best time of the year to visit Philadelphia).

Article I

Everyone who followed John Grant's series on assembler may be interested in this. If you were disappointed that the fifth installment gave an interface to Fortran but not to COBOL, then this is your lucky day. To everyone else: maybe you should read this anyway; you might learn something useful for the DG edition of

Trivial Pursuit. I've been experimenting with mixing assembler with both COBOL and ICOBOL, and today, I'll share something I discovered about COBOL and MASM. I'll have to save the ICOBOL tips for a future column.

If you recall, John's fifth installment detailed the method used to pass parameters among Fortran, MASM, and other languages. The standard method of passing parameters between COBOL and MASM is nearly identical, but there is one important rule: COBOL always uses byte addresses. If you use word addresses in your assembler module parameters, you can't talk to COBOL very well.

This isn't the method I used this time, and I won't cover it here. However, there are sample programs in the COBOL manual and on the software distribution tape that show this technique (although you must catch the typesetting errors that are present in some editions).

I used a much simpler method, although it does tend to limit what you can pass around. The program I was working on needed to read low-volume input from an IAC port. The data would contain any control characters at one time or another and thus needed to be read in binary mode. However, simply opening a file with the console port name and reading one-byte, fixed-length records wouldn't cut it; PMGR kept getting in the way. Furthermore, I wanted to have the ability to either poll the port or have time-outs to prevent

the process from pending on the input, since it would be watching several phone lines and an input pipe for operator control. I didn't know of a simple way to poll the IAC lines to see if data was present, so I decided multitasking was the best answer. That way I could dedicate a task to each port and give those tasks higher priority than the main processing task to avoid loss of incoming data.

The solution was to write an assembler language module that has four functions: initialize, read a data byte, reset input buffer, and terminate. The initialize function opens the port and then starts another task to read a byte and fill a ring buffer. Terminate kills the read task and closes the port. Reset input buffer simply discards all data in the buffer without returning it. Read a data byte returns either a

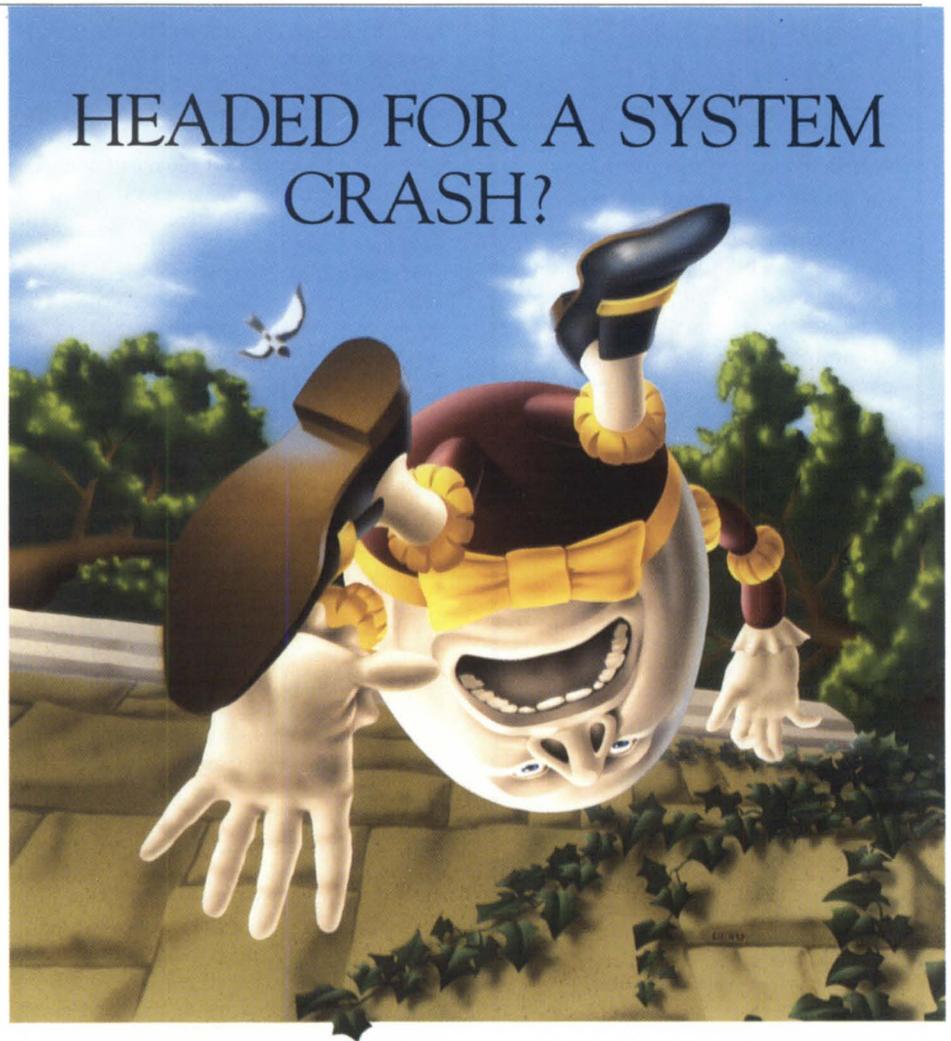
Figure 1: One word of memory defined as external

```
01 WSCW          EXTERNAL.
05 WS-CALL-NUMBER PIC 9999 COMP.
01 WS-CALL-BYTES REDEFINES WSCW.
05 WS-CALL-LEFT-BYTE.
10 WS-CALL-LEFT-NUM PIC 99 COMP.
05 WS-CALL-RIGHT-BYTE.
10 WS-CALL-RIGHT-NUM PIC 99 COMP
```

Figure 2: Short program to load the decimal value 512 into WSCW

```
.EXTD WSCW
.ENT MRTN1
.DUSR D512= 512.

.NREL 0
MRTN1:WSAVS 0
NLDAI D12,0
XNSTA 0,WSCW
WRTN
```



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DISCOVERIES

byte of data or a code indicating why it can't.

Since the only input required to the function is a number from one to four and the return is either 8 bits of data or some status flags, the communications between the two modules can be done in 16 bits (one word) with room to spare. Therefore, rather than go through complicated stack maneuvers to pass address pointers, I simply wrote the modules so the two routines access the same memory directly using external addresses.

In COBOL, I defined one word of memory as external (see Figure 1). I also redefined it so that I could access either of the two bytes or the whole word of memory. Although COBOL isn't well suited for it, I still could easily check any bit in the word.

In assembler, I simply included ".EXTD WSCW" in the source code. Now I can access that word of memory directly with any assembler operation. For example, Figure 2 shows a short program that loads the decimal value 512 into WSCW, thus setting the COBOL left number to two and the right number to zero.

From COBOL, the statement CALL "MRTN1." would execute the assembler routine MRTN1 and set the value accordingly. Obviously, this is a trivial demonstration, but you can see how easily assembler can get to the memory space of COBOL by using external variable references. Since all address calculations are handled by LINK, you also save a few CPU cycles, because you aren't playing with the stack to retrieve addresses. This also lets you use both byte and word addresses in the assembler—as far as MASM is concerned, the address of the memory location will be calculated and put into the instruction by the linker.

Are there drawbacks? I'm not sure, but the software continues to work. I took the precaution of placing the COBOL external references at the beginning of the working storage, because COBOL uses byte addresses, and I wanted to ensure that WSCW was word aligned. Putting it at the beginning gave me a word-aligned memory location. I can't be positive that it won't change some day, since I have no documentation to tell me one way or the other.

I also have a problem with multiple assembler modules all declaring WSCW and using it. I sometimes get error messages about an overwrite from the linker, which can be suppressed with the /OVER switch. The program works OK, so I've been ignoring those messages for now, but someday I'll have to find out where they are coming from. I have looked in the

manual and that message isn't listed. (Expletive deleted!) I guess that message isn't allowed in the user community.

Article II

Recently, I spoke at a Unigraphics users group meeting. As those of you who follow CAD/CAM may know, McDonnell Douglas (MDC) terminated their OEM agreement with DG and is planning to phase out their DG platform during the next three to four years in favor of DEC systems. Since roughly half of the users at the meeting were DG based, I tried to find out exactly what their stance was at this time.

After talking to several managers in the marketing area, my impression was that MDC felt the CAD/CAM market was moving toward Unix-based workstations that communicate with file servers and use TCP/IP. I also asked if the plan to phase out DG was still on; I was told yes. I asked if they thought they might reconsider DG as a platform. They said anything was possible, although they didn't see that as probable. I then asked what might cause them to rethink their stance, and they said that DG would have to have a commitment to Unix systems, the workstation concept with TCP/IP networking, and graphics.

Just three weeks prior to this, I had read an article in *Digital Review* that quoted Ken Olsen, the head man at DEC, as saying that Unix was "snake oil." His implication was that it is being touted as a cure-all, but for a number of reasons, including the proliferation of dialects, it is a non-solution. The article added that, although DEC has a Unix product, they think that the future is in proprietary systems that take advantage of the hardware they run on. DEC doesn't support TCP/IP, nor are there any plans to do so. Furthermore, if they could get away from Unix, they would seriously consider it.

I mulled this over a bit before pursuing it any further, because several things didn't make sense to me. MDC wants Unix and TPC/IP. The MV/1400 with DG/UX or MV/UX offers solutions that I feel are superior to anything DEC or anyone else offers. Furthermore, DG has a TCP/IP product (although the implementation isn't complete); DEC does not. If you're trying to support Unix and TCP/IP, it doesn't seem to make sense to prefer DEC, at least not from the articles I've seen.

Then Data General announced it was committing 50 percent of its R&D effort to

the Unix platform. DG also announced plans for the creation of a Unix engine for Motorola that could be one of the most powerful systems available.

I haven't talked to MDC again, but if this doesn't get a reaction out of them, nothing will. I imagine the 200 or more DG-based Unigraphics sites are watching and waiting as well. Most of them have been concerned about the future of their systems, and I have a feeling that at their next annual users group conference in February they will be looking for MDC to commit to what they want: a future on their existing equipment.

Article III

Let's hear it for the U.S. Post Office! I like to do things to my software like put in checks to see if the state and zip code that the user entered make a valid combination. I have been using a particular table that was built from the zip code directory some years ago. The last time I checked (a year or two ago), it was current and accurate. Recently, I found out that the table assignments were violated by none other than the post office.

There are a few towns in Maryland (area 1) that are serviced by the Washington D.C. (area 2) post offices. Thus, there are a series of zip codes, 20000-20034, that are assigned to Washington D.C. but are used by both D.C. and Maryland. Therefore, if you edit state and zip code values, for that short series of zip codes, you must allow both the MD and DC state abbreviations. Your tax dollars at work. . . .

Article IV

Nothing new in the mailbag this month, although there are two items left from last month. One asks about an RDOS to AOS BBASIC conversion, and the other asks about CASE (computer-aided software engineering) tools. I plan to cover both topics in the future, so please stay tuned. Δ

Jim Siegman is a contributing editor to Focus, chairman of the NADGUG audit committee, and treasurer of the Chicago Area Data General Users Group. Send comments or questions to Datamark Corp., 3700 W. Devon, Suite E, Lincolnwood, IL 60659; 312/673-1700.

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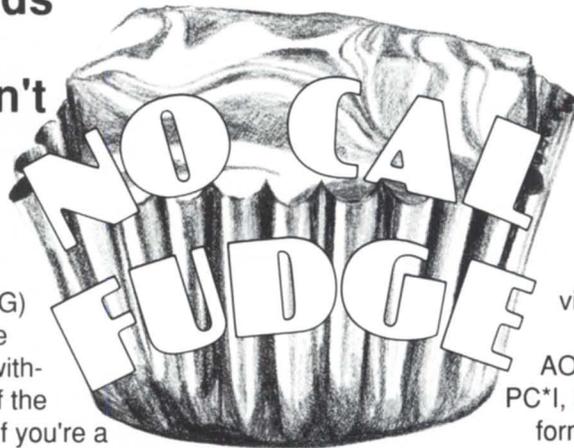
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Circle 63 on reader service card.

Sounds good doesn't it?

This regional interest group (RIG) has all the benefits without any of the calories. If you're a member of NoCalFUDGE (The Northern California Frequent Users Of Data General Equipment) or a DG user in the Northern California area, you'll want to mark your calendar for the second Wednesday of every odd month. These are the days to set aside to attend NoCalFUDGE meetings. The meetings are always held at the Oakland Airport Hyatt beginning at 6:00 p.m. This year



the topics covered included pre-views of CEO rev 3.0 and AOS/VS rev 8., PC*I, System Performance and a roundtable on CEO rev.3.0. Upcoming meeting topics are: September-System Management Issues, November-Roundtable discussion on AOS/VS Rev 8.

For more information on meetings, the group itself or how you can help, contact Steve Tyler at Aircor Solar Products, 4020 Pike Lane, P.O. Box 4105, Concord, CA 94524 or call 415/680-0501 from 8a.m. to 5 p.m. (PDT/PST).

Circle 57 on reader service card.

Crossed signals

The AOS/VS CEOwrite pricing controversy continues

The deadline for this article was June 1, so it reflects the status of the pricing controversy concerning CEOwrite as of that date.

I'd like to thank everyone who responded to the article I wrote on CEOwrite that appeared in the June issue of *Focus*. I received numerous phone calls and letters from DG users supporting the statements I made. I also received a response from Data General.

The responses I received from the DG customer community were emphatic. A few quotes will convey the general feeling:

"Very displeased. Will not sit well with management!"

"I was surprised and embarrassed when CEO arrived without the advertised software. Local Data General representatives were quick to point to a January article in *MIS Week* on the marketing decision by DG to sell CEOwrite as a separate package. This one press release is supposed to [absolve] Data General from all previous promises."

"We very much want to replace CEO Word Processing with CEOwrite, because it features many of the options we have been asking for, but we will *not* do it for that amount of money."

Many said that they would have been less upset if DG hadn't confused the pricing issue with their early announcements for CEOwrite. However, because of the way DG handled the situation (first saying it was free, then saying it would cost a nominal fee, and finally charging \$600 to \$10,000 depending on the system), Data General has a tiger-by-the-tail.

DG's response certainly deserves careful review and evaluation. I want to thank DG for responding to our query. The following are quotes from DG's response (full quotes only, nothing out of context) with my responses immediately following each quote.

When approved, pricing may be provided on a "not to exceed" or "final" basis, depending on the timing and whether final pricing is available. This level of disclosure is provided in

writing and clearly identified.

Additionally, the disclosure agreements signed by non-DG persons to whom disclosures are made acknowledge an understanding of the cooperation between the two parties. My concern is that your letter may hamper our ability to have disclosure-level discussions with OASIS.

I understand the theory of pricing quotes, of vendor-customer pricing negotiations, and that pricing should be at the vendor-to-customer level. I also understand the need for this relationship. However, "free" and "included" are not prices. For two years, right up until the NADGUG conference in Las Vegas, nobody from the DG customer community tried to force DG representatives to commit to whether AOS/VS CEOwrite was a free package or if it would be included with the CEO rev 3.0. We didn't browbeat, attempt to intimidate, or bully anyone on this subject. We simply asked if they knew what the pricing was going to be, and we were told it was free. The information we received from DG was given freely.

The suggestion that customers who would prefer to receive a product for free rather than pay for it should contact their DG sales reps to initiate price negotiation was misinterpreted. The inference that DG has priced CEOwrite VS on a "negotiated on an individual customer" basis should have been represented as:

"The business relationship between DG and any of its customers is a two-party issue.

"If on an individual basis a customer feels that he or she has received a specific commitment on the price of CEOwrite VS to their company prior to the announcement, the situation should be pursued through the local sales representative, rather than through OASIS."

I'm not sure I understand the subtle differences. Although I was present when Bob Tway, DG vice president of Eastern Operations, gave his talk to OASIS members, and I still believe I interpreted what he said about pricing quite reasonably... maybe it's all in the perspective of the individual. What kind of "specific commitment" are we talking about? I'm concerned that the way I interpret "specific commitment" and the way Data General interprets it are not the same. When DG sends out its representatives to meetings and individual sites saying that a particular product is included, bundled, or free, isn't that a commitment?

In addition, I'd like to point out that (unlike our competitors) we have never charged for a

CEO revision since the product's inception in 1981. SSS has been the ongoing mechanism for customers receiving enhancement, at an obvious and substantial savings in licensing costs. Revision 3.00 functionality was almost a new product itself—yet customers with SSS will receive it at virtually no cost. Our pricing policy with CEOwrite as we did is certainly justifiable.

Again, I must emphasize that we are not talking about DG general pricing policies; we are talking about the mixed signals DG sent to its existing user base regarding the pricing of one product. If DG had not made it so clear that CEOwrite would be the word processing package of choice, promoted conversion from CEO WP to CEOwrite, and promised that CEOwrite was considered an upgrade to the existing CEO environment, maybe there would have been no need for this controversy. However, DG cannot overlook the fact that its customers have been instrumental in guiding DG's development effort toward a superior word processing program. Our companies have been committed to DG. As for OASIS, we have had an open and productive relationship with DG for several years. Though the road has been a bit rough at times, we were able to stay in a win-win relationship. I would hate to see the relationship jeopardized, but OASIS must function as a collective voice when needed.

Although I did receive a response from DG, I was hoping for a more specific and direct answer to the issue. I have also received numerous responses from DG customers (all in agreement with the premise I set in the first article). I am interested in hearing from the user community about how other vendors handle pricing of upgrades or enhancements to their software packages. I hope that by the next *Focus* deadline, I will have more concrete news for you all.

Just a gentle reminder that I need your comments, suggestions, questions, and ideas in order to keep writing about CEO. You, the readers of *Focus*, have been asking for more articles on office automation and CEO, so now is your chance. I look forward to hearing from you. Δ

Bobbie Pressman is the president of OASIS and the manager of training and office systems at Deutsche Credit Corp., P.O. Box 329, Deerfield, IL 60015; 312/948-1814.

DG/SQL relational data base enhanced

Westboro—Data General has introduced an enhanced version of DG/SQL relational data base software. DG/SQL 4.00 doubles performance in transaction processing applications compared to the previous release. Using the industry-standard debit/credit benchmark, DG/SQL 4.00 performed at 17 transactions per second, running on a Data General Eclipse MV/20000 model 2.

DG/SQL also has new functionality, such as new storage structures for improved performance, including hashing, partitioning, and clustering. DG/SQL uses the ANSI- and de facto-standard SQL data manipulation language, and is supported by fourth-generation language software. DG/SQL provides full support for referential integrity in the data base.

In addition, DG/SQL is now supported by the Data General AOS/VS Transaction Processing Management System (TPMS). TPMS and DG/SQL can be used for large multiuser environments performing on-line transaction processing. TPMS also works in conjunction with DG/SQL recovery features.

DG/SQL pricing for a development license ranges from \$17,400 for the Eclipse MV/20000 model 2, to \$2,900 for the Eclipse MV/1400 DC. Pricing for DG/SQL runtime licenses ranges from \$7,315 for the Eclipse MV/20000 model 2, to \$960 for the Eclipse MV/1400 DC. DG/SQL 4.00 is available for immediate shipment.

Δ

Circle 75 on reader service card.

DG offers toolkit to integrate workstations

Westboro—PC Workstation Services (PCWS) is a set of software tools from Data General that lets MIS or DP staff customize an integrated PC work environment. The software operates on the DG/PC*I communications platform. PCWS offers built-in electronic mail functions, and access to host-based services such as electronic filing, mail, and printing.

By defining scripts (macros), PCWS customers can integrate the MS-DOS-based word processing, spreadsheet, graphics, and data base applications that they have standardized. PCWS customers can link these applications to functions

available in the host-based office system. The resulting environment blends the advantages of PC applications with the power of DG Eclipse MV systems over a local area network.

The PCWS workstation component is supported on the Data General Dasher/286, the IBM PC/AT, and qualified 100 percent PC/AT compatibles. The PCWS host component is supported on any Data General Eclipse MV computer operating on AOS/VS rev 7.50 or later, and CEO rev 2.24 or later, XTS rev 5.31 or later, and WTS rev 1.00 or later.

PCWS also features the following:

- the creation of a cooperative client/server environment through the DG/PC*I network
- the use of script (macro) features for direct access to MS-DOS applications, AOS/VS, and CEO filing systems
- full-featured local processing of electronic mail
- a PC-oriented interface, including a multitasking environment manager, pop-up menus, moving-bar menus, and optional use of a mouse for point-and-select operations
- access to context-sensitive on-line help, interrupt, calculator, mail, index, and filing functions.

PCWS costs \$395 per user with a minimum initial purchase of a 50-user package for \$19,750. The initial minimum purchase includes up to four days of Data General consulting and installation support. Additional PCWS purchases, following the initial purchase of 50, is \$395 per user. An unlimited right-to-use license for MV system customers is available for \$150,000. PCWS will be available for shipment 60 days ARO.

Δ

Circle 76 on reader service card.

PC/VS now Novell compatible

Corte Madera, CA—Rational Data Systems has announced an enhancement to PC/VS, its software package that integrates IBM PCs and compatibles with Data General MV series minicomputers.

With PC/VS rev 3.31, PC workstations that are connected to Novell Advanced Netware networks can simultaneously communicate with Data General MV series computers via RDS's PC/VS software. Previously, PC/VS required its own Ethernet network controller in each PC. If users wanted to run Netware, an additional controller was required. With the

enhanced version, PC/VS communicates with the network via the Netware device driver, allowing Netware and PC/VS to share the controller.

The hybrid allows PC/VS to operate across any physical and data link scheme supported by Netware, including Ethernet, IBM Token Ring, Arcnet, Omninet, and StarLAN. In these configurations, the Netware server is configured as a bridge between the network for the PC workstations and an Ethernet network used to link the MV series minicomputers.

When used with Novell software, PC/VS requires Advanced Netware 286 rev 2.0a or later.

Rational Data Systems, 5725 Paradise Dr., Corte Madera, CA 94904; 415/924-0840.

Circle 77 on reader service card.

Concept Automation announces Text Scout

Sterling, VA—Concept Automation has announced Text Scout, a contextual search package that searches CEO documents for occurrences of a particular text string. CEO users are no longer restricted to searches by keywords contained in a document summary. Text Scout searches the documents for text contained anywhere within the document.

Text Scout runs as an integrated application under CEO, utilizing CEO standard features. Searches may be limited to a cabinet, drawers, folders, or document by use of templates, and located documents may be viewed, edited, deleted, printed, moved, or used as input for another search.

Prices for Text Scout start at \$1,250. Demonstration copies are available upon request.

Concept Automation, 1319 Moran Rd., Sterling, VA 22170; 703/450-6000.

Circle 78 on reader service card.

Western Automation announces Acumen memory boards

Boulder, CO—Western Automation, a manufacturer of high-performance memory products, has announced Acumen memory boards and memory upgrade services for Unix/Xenix-based minicomputers, including the Data General MV/2000, among others.

The Acumen memory boards and upgrade services provide Unix/Xenix-based

minicomputer users with performance and reliability to match the original system manufacturer's memory. Each board is burned in to ensure solid field operation, and a four-layer circuit design enhances reliable, high-speed performance.



All Acumen memory boards are designed to be 100 percent hardware and software compatible with the original manufacturer's system, and are covered by a one-year warranty. The warranty includes free overnight shipping of a replacement board, if needed, to any customer site located in the continental U.S. and Puerto Rico. A detailed installation

manual is provided with each memory board.

Acumen memory boards are available in various sizes, ranging from 1 MB to 8 MB. Prices for upgrade services and memory boards start at less than \$500.

Western Automation, 1700 N. 55th St., Boulder CO 80301; 303/449-6400 or 800/227-4637. Δ

Circle 79 on reader service card.

MOR Systems offers Pitstop

Yorktown Heights, NY—MOR Systems has announced an ISAM file utility called Pitstop. The program is used for mass ISAM file recovery and maintenance on DG ICObol and COBOL systems. Pitstop may be run unattended or through user-friendly screens that guide its operation with "help hot keys." In either mode, the program automatically identifies possibly corrupt files, and will ISAMVERIFY or reorganize problem files as necessary. The operator doesn't have to deal with alternate keys, key positions, lengths, etc.

Interactive mode allows tagging of specific files and menu control of program operation.

MOR Systems is offering a fully functional, free trial copy of Pitstop to anyone who requests it. The program is available to be downloaded using Blast by calling 516/627-2838, (1200,8,1,N) (username = FREE, password = PITSTOP). You can request it by mail for a small media and shipping charge. For mail orders, call 914/739-1033, 212/921-0055, or 516/326-6760. The list price of Pitstop is \$795. License agreement applies.

MOR Systems, P.O. Box 456, Yorktown Heights, NY 11059; 914/739-1033. Δ

Circle 80 on reader service card.

Strobe Data announces .5 MB Falcon Co-processor

Bellevue, WA—Strobe Data has announced the .5 MB model of the Falcon Co-processor is available for delivery. The Falcon Co-processor, which provides a

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- IV) String/Unstring, Parsing & Text handling routines for faster character manipulation.
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complete environment for RDOS on the Dasher/286 and other XT and AT clones, was originally introduced with 1 MB of mapped ECC memory to take advantage of its ability to execute multiuser DG desktop software.

Because some users were executing versions of RDOS intended for the Nova, gaining performance advantage by passing the Eclipse emulation needed for DG RDOS, much of the memory on the Falcon board wasn't being used.

The .5 MB model is manufactured with 512 KB of ECC memory; 64 KB is reserved for emulation code. This provides 448 KB of mapped memory for RDOS and applications software.

Both models use the PC devices to emulate DG-compatible peripherals. Multiplexors and nine-track magnetic tape controllers are available for the PCs. All the standard disk systems can be emulated on currently available PC hard disks and disk controllers.

Model evaluation units of the .5 MB model are available to qualified Data General systems software developers and VARs for \$2,095.

Strobe Data, 13250 Northup Way, Bellevue, WA 98005; 206/641-4940. Δ

Circle 81 on reader service card.

KEA Systems releases D400 emulator

Vancouver, B.C.—ZSTEMpc-D400, a high-performance emulator released by KEA Systems, emulates Data General's D400, D200, and D100 terminals, and runs on the IBM PC, AT, XT, PS/2, and compatibles. ZSTEMpc-D400 emulates D400 features: windows, protected character fields, programmable margins, horizontal scrolling, bidirectional vertical scrolling, and all cursor-related functions. Character support includes the Greek alphabet, word processing fonts, math fonts, line drawing fonts, and superscript and subscript fonts.

ZSTEMpc-D400 has communications support, including the standard DOS communication ports COM1 to COM4. It additionally supports the Zenith Z304/404 and ITI Lineup XT synchronous/asyn-

chronous boards in asynchronous mode. The Ungermann-Bass Net/One Personal Connection LAN is also supported.

Three different file transfer options round out ZSTEMpc-D400's capabilities: ASCII, Kermit, and Xmodem. Further facilities include DOS access for running other DOS programs while retaining terminal connection, a user-programmable help facility, a phone directory, and printer support.

ZSTEMpc-D400 requires a system with a minimum configuration of 256 KB; one serial-port or internal modem; a Color Graphics (CGA), Hercules, Enhanced Graphics (EGA), or Video Graphics Array (VGA) adapter; one floppy drive; and MS-DOS version 2.0 or later.

The package is priced at \$160. ZSTEM software is not copy protected, but it is licensed for use on a single system. Site, institution, and corporate licenses are available. Quantity and dealer discounts are also available.

KEA Systems, 2150 W. Broadway, Suite 412, Vancouver, B.C., Canada V6K 4L9; 604/732-7411. Δ

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P H I L A D E L P H I A

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Set your agenda now

This year's NADGUG conference offers more activities and sessions than any one member could possibly attend. So now is the time to look over the tentative schedule of events and plan your time accordingly. Don't forget to set aside a few hours for some of the historical sites that are within walking distance of the hotel. If there are two sessions held concurrently that you would like to be in on, don't worry. Audiotapes of the sessions will be on sale during and after the conference.

Sunday—August 28, 1988

9:00 a.m.—5:00 p.m.

NADGUG Executive Board meeting (open to officers, standing committee chairs, and RIG/SIG chairs)

4:00 p.m.—8:00 p.m.

Conference registration desk open (pick up your materials if preregistered, or register on site)

Educational Services seminars and CEO workshop registration desks open

Monday—August 29, 1988

7:45 a.m.—8:45 a.m.

Educational Services seminars and CEO workshop on-site registration

9:00 a.m.—noon

Educational Services morning seminars and OASIS-sponsored CEO workshop (requires separate fees and registration)

Noon—1:00 p.m.

Lunch break

1:00 p.m.—7:00 p.m.

Conference registration desk open (pick up your materials if preregistered, or complete on-site registration)

1:00 p.m.—4:00 p.m.

Educational Services afternoon seminars and OASIS-sponsored CEO workshop (continued from morning)

5:30 p.m.—6:30 p.m.

First-timers orientation

7:30 p.m.—9:00 p.m.

Welcome reception (ticket required)

Tuesday—August 30, 1988

7:30 a.m.—9:00 a.m.

Speaker orientation breakfast (for Tuesday presenters)

8:00 a.m.—6:00 p.m.

Conference registration, exhibits, exhibit area cafe open

9:00 a.m.—3:00 p.m.

Guest hospitality suite open (special guest orientation at 9:30 a.m.)

9:00 a.m.—10:00 a.m.

Special general session

Keynote address

Dr. Nathan Goodman, senior vice president for Research and Development, Codd and Date International

10:00 a.m.—10:30 a.m.

Complimentary coffee break

10:30 a.m.—11:30 a.m.

Special general session

Data General Communications Strategy

Colin Crook, Data General senior vice president of Communication Systems Group, and Joe Forgione, director of Communications Product Marketing

11:30 a.m.—1:00 p.m.

Lunch break for attendees

Lunch meeting for RIG/SIG chairpersons

Noon—5:00 p.m.

Audiotape sales open

1:00 p.m.—1:45 p.m.

End-user

"The Driving Force Behind Commercial Automotive Insurance"
Pat Bloom and Tom Nerney, Maguire Insurance

Technical

"Intelligent Device Drivers"

Bruce Rosner, SRS Systems

Management

"Not All 4GLs Were Created Equal"
Dan Scharf, Cognos

System Managers Panel (double session)
Brian Johnson, B.J. Inc.

"Data General Support of Third-party Hardware"
Glen Kaplus, Data General

"Network Planning, Designing, Installation, and Management"
(double session)
Andrea Girardi and Ranjit Singh, Data General

1:45 p.m.—2:00 p.m.
Short break

2:00 p.m.—2:45 p.m.
End-user
"Case Study: Automated Assembly Line Utilizing CIM and JIT"
Richard Sardell, Data General

"Introduction to Data Bases"
Sue Dintelman, DMS Systems

Technical
ICOBOL Roundtable

Dennis Doyle, Bankmatic Systems

Management
System Managers Panel (continued)

"Comparisons of AOS/VS E-mail Options"
Tom Bishop, Concept Automation

"Network Planning, Designing, Installation, and Management"
(continued)

2:45 p.m.—3:00 p.m.
Short break

3:00 p.m.—3:45 p.m.
End-user
CEO Roundtable (double session)
Charlene Kirian, Intercon Associates, and Roberta Pressman,
Deutsche Credit

Technical
"X.400: Implementing E-mail Links" (double session)
Alex Cullen and Jock Shearer, Data General

Management
"System Management at a Glance"
David Bultman and Diane Olson, SAS Institute

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L.E. Staples, Datarace

"ICOBOL in the Age of Micros"
Gerry Manning, Gerry Manning and Associates

"Capacity Planning and Performance"
Bob Barton, Data General

3:45 p.m.—4:00 p.m.
Short break

4:00 p.m.—4:45 p.m.
End-user
CEO Roundtable (continued)

Technical
"X.400 Implementing E-mail Links" (continued)

"Your Mileage May Vary: An Introduction to Computer Benchmarking"
Tom Gutnick, Data General

"VT200 Support Under AOS/VS"
Michael Genebach and Russell Cordner, Concept Automation

Management
"Data General's Unix Strategy"
Peter Griffiths, The Instruction Set, and Anne Peter, Data General

"Improving the Security of Information Systems"
Alan Verbit, Glickman, Berkovitz, Levinson, and Weiner

5:00 p.m.—6:00 p.m.
SIG meetings
AOS/VS, Meet the *Focus* Editors, ICOBOL, Wordperfect, BBASIC, Lions Gate

7:30 p.m.
Phillies night
(Phillies versus San Francisco Giants). Free tickets and transportation will be provided to attendees preregistered for the full conference or full social programs. A limited number of tickets will be available for sale in the conference registration area for late or on-site and one-day registrants.

Wednesday—August 31, 1988
7:30 a.m.—9:00 a.m.
Speaker orientation breakfast (for Wednesday presenters)

8:00 a.m.—6:00 p.m.
Conference registration, exhibits, and exhibit area cafe open

Finally... An AOS/VS Performance Seminar for Normal Humans.

Brian Johnson is leading three-day seminars covering the basic principles of AOS/VS performance analysis & capacity planning. The minimum prerequisites are 6 months of experience as an AOS/VS System Manager or System Programmer, and access to a performance analysis utility such as **PERFMGR** or DC's **MONITOR**.

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MV20000 Mod 1 to Mod 2	6160 S/S, 73Mb Call	D211 \$550
upgrade Call	6214 S/S, 602Mb \$4,500	D200 \$125
MV15000, Mod 20 Call	6061 S/S, 192Mb \$2,800	D400 \$375
MV15000 Mod 8 to Mod 20	6122 S/S, 277Mb \$3,900	D410 \$575
upgrade Call	6329,120Mb Disk Call	D460 \$700
MV15000 Mod 10 to Mod 20	6236-A, 354Mb \$13,000	ISC-2 \$1,800
upgrade Call	6236, 354Mb S/S \$14,500	IAC-16 \$4,200
MV10000, 16Mb Call	6237, S/S, 1.06 Gb ... \$44,500	IAC-8 \$3,200
MV8000-II, 2Mb \$9,800	6239,592Mb	4543 MCPI \$3,900
MV8000 9600 Series ... \$5,500	(New) \$20,500	ATI-16 \$1,900
MV7800, 4Mb \$9,200	6123 Streamer \$2,900	AMI-8 \$1,100
MV4000DC, 2Mb,	6026 S/S, 800/1600	ALM-16 w/Daughter \$450
120 Mb Disk \$6,900	(New & Used) Call	TCB-16 Call
MV4000, 2Mb \$3,500	6125 1600 bpi (FCC) ... \$2,400	TCB-8 Call
M600, BBU, 1Mb \$1,500	4374 1200 LPM \$15,000	
Nova 4 256Kb \$995	4373 890 LPM \$15,500	
S-20 Systems Call	4327 300 LPM Call	
MPT 100 \$400	4364 600 LPM	
Model 20/30 Call	(New & Used) Call	
Model 10, 256Kb \$995	4354-N 340CPS \$2,000	
8704 FPU MV8000 Call	6363 160Mb Add-on ... \$2,900	
8761 FPU MV4000 \$1,200	6328 70Mb Add-on \$1,500	
8749 BBU-MV10000 ... \$5,000	6311 Cart Tape \$2,200	
8746-B BBU \$1,800	6270-B Cart Tape \$2,000	
8762 Expan Chass Call	6300 1600/6250 \$2,500	
1625 5KVA power condi-		
tioner, MV Series \$1,400		

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9:00 a.m.—10:00 a.m.

Special general session

NADGUG general business meeting

Joyce Carter, NADGUG president

Election of officers, special prize drawings, and other business

10:00 a.m.—10:30 a.m.

Complimentary coffee break

10:30 a.m.—11:30 a.m.

Special general session

Executive panel

Interactive discussion between Data General senior management and the NADGUG Executive Advisory Council

11:30 a.m.—1:00 p.m.

Lunch break

1:00 p.m.—1:45 p.m.

End-user

"Managing an End-user Help Desk"

Charlene Kirian, Intercon Associates

"PC Access to Information in a Multivendor Network"

Chris Zannetos, Data General

Technical

"AOS/RT32 Rev 5.00"

Craig Presson, Data General

"AOS/VS Rev 8.00"

Tim Reiter, Data General

"Overview of the DG/UX Kernel"

Andrew Huber, Data General

Management

"Evaluating Your Information Services Function"

Don Bush, Deloitte, Haskins, and Sells

1:45 p.m.—2:00 p.m.

Short break

2:00 p.m.—2:45 p.m.

End-user

"Quality Control in a Manufacturing Environment"

Dick Kluis, Orbi

"New CEO Sites"

Roberta Pressman, Deutsche Credit, and Charlene Kirian,

Intercon Associates

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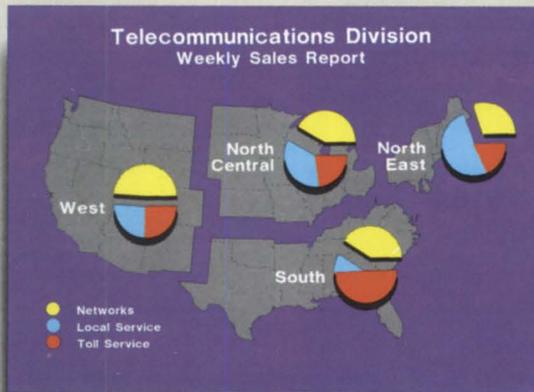
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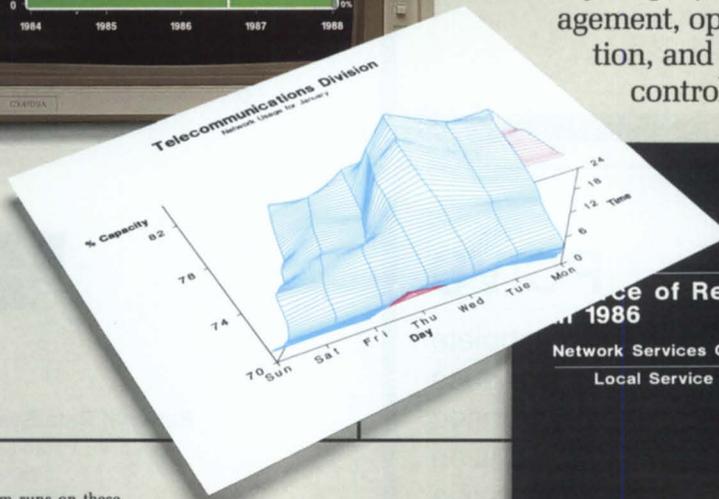
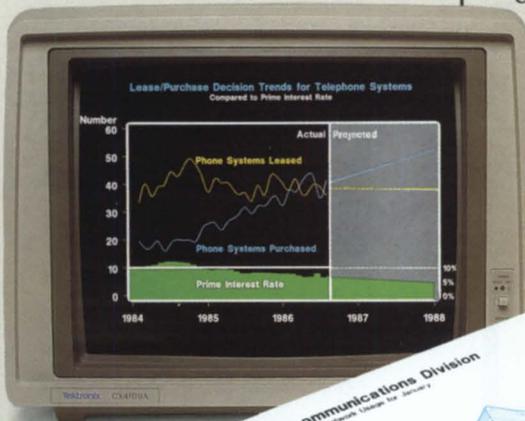
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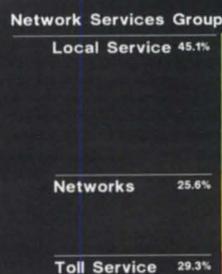


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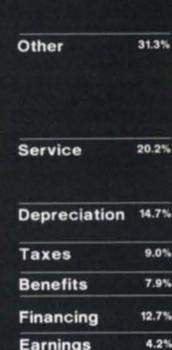
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Telecommunications Division

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Technical

"AOS/VS Rev 7.xx Support Policy"
Tim Reiter, Data General

"The DG/UX Scheduler"
Michael Kelly, Data General

"Implementation of CAMAC Real-time Standards"
Richard Kouzes, Princeton University

Management

"New Wiring Techniques for Data Communications"
Aldo Falossi, Cable Management System

2:45 p.m.—3:00 p.m.
Short break

3:00 p.m.—3:45 p.m.

End-user

"System Integration from PCs to Mainframes"
Dave Kephart, Illinois State University

"Case Study: Particle Beam Fusion Accelerator"
S.J. Chaba, Sandia National Laboratories

Technical

"Migrating from INFOS to DG/SQL: Issues and Answers"

Ed Hickland and Robert Harrison, Data General

"Design and Implementation of the DG/UX File System"
Jeff Kimmel, Data General

Management

"Capacity Planning Made Easy(er)"
Brad Friedlander, Arthur D. Little

Disaster Recovery Roundtable (double session)
Joe Cannata, Data General

3:45 p.m.—4:00 p.m.
Short break

4:00 p.m.—4:45 p.m.

End-user

"Data General's Wide Area Intelligent Network Strategy"
Terry Prickett, Data General

"Office Automation at the World's Largest Commodities Exchange"
Frank Chereck and Denise Sikorski, Chicago Board of Trade

Technical

"Everything You Wanted to Know About Cheaptapes"
Steve Robsky, Data General

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Management

"MV/UX as a Cross-system Development Environment"
John Huddleston, USDA Soil Conservation Service

4:45 p.m.—5:45 p.m.
SIG meetings
SIG/UX, PerfSIG, FedSIG, Educators, OASIS

7:00 p.m.—11:00 p.m.
Cocktail reception and banquet (entertainment by "Participatory Illusions" magician Bill Herz)

Thursday—September 1, 1988

7:30 a.m.—9:00 a.m.
Speaker orientation breakfast (for Thursday presenters)

8:00 a.m.—10:00 a.m.
Conference registration and Educational Services registration open

9:30 a.m.—2:00 p.m.
Exhibits, exhibit area cafe, and audiotape sales open

9:00 a.m.—9:45 a.m.
End-user

"Integrate, Emigrate, or Evaporate"
Trevor Mathews, Middelburg Steel and Alloys

"Multivendor Office Automation Connectivity"
Guy Pribyl and Judy Hopkins, Wordperfect

Technical

"Continuous Incremental Backups"
Brian Johnson, B.J. Inc.

Management

"Xodiac-to-OSI Migration Strategy"
Steve Lane and Mark Townsend, Data General

"From Teletype to T1: The Evolving Network"
A. Jay Gross, Paradyne

"The One-person Shop"
William Topoly, Webber Gage (Starrett)

9:45 a.m.—10:15 a.m.
Complimentary coffee break

10:15 a.m.—11:00 a.m.

End-user

"MicroEMACS—A Powerful (and Free) Editor"
Diane Olson, SAS Institute



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8708 2MB MV 8000 Mem	1,950
8687 256KB S/140 Mem	290
8656 256KB MOS Eclipse Mem	250
8765 2MB MV Universal Mem	1,950
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6280 50MB w/BMC	1,900
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6130 Dasher D400	290
6168 Dasher D210	390

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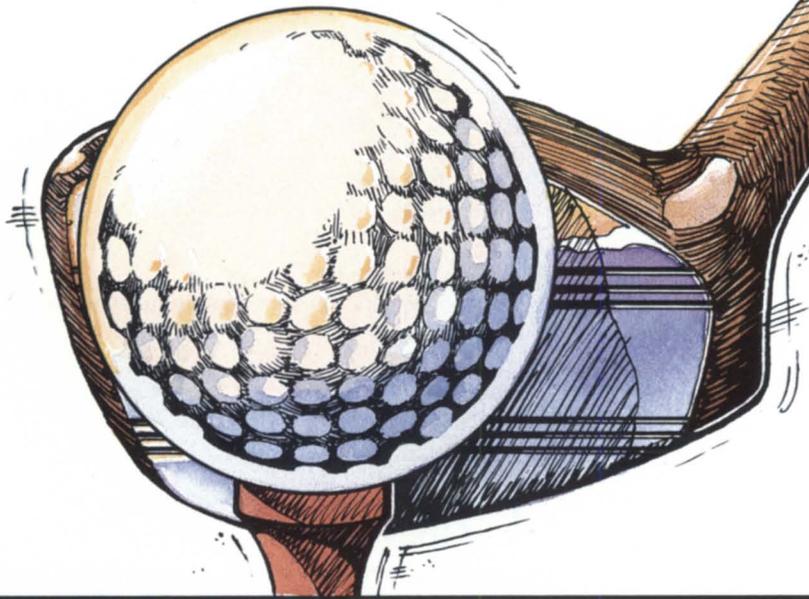
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Technical

AOS/VS Roundtable (double session)
David Novy, 3M

"Syslog: Going Beyond Report"
Ivan Liss and Thomas McMillan, Radford University

"Streamlining Your Software Development
with Data General Tools"
Kim Medlin, Data General

Management

"Hierarchical vs. Relational Data Bases"
Peter Walsall, Datalynx

"A European Perspective on Business Communication
and Networking"
Rob Howell, Howell Associates

11:00 a.m.—11:15 a.m.
Short break

11:15 a.m.—noon

End-user

"Implementing Emerging Technologies"
Orin Crossley, Reserve National Insurance

Technical

"Disk Optimization and Performance"
Jim Schindling and Eric Fredrickson, DMS Systems

AOS/VS Roundtable (continued)

Management

"Better Field Service Through Technology"
Fred Cochrane, Data General

"Data Base/4GL Products and Strategy"
Mike Normile, Data General

"Automated Software Configuration: Path to Productivity"
Kevin Nix, Softool

Noon—1:00 p.m.
Lunch Break

1:00 p.m.—4:00 p.m.
Educational Services seminars (requires separate fees
and registration)

1:00 p.m.—11:00 p.m.
Atlantic City post-conference tour

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ON-LINE HELP

Who to call for answers about NADGUG and FOCUS

NADGUG's electronic bulletin boards

(300 or 1200 baud modem)
 Rational Data Systems 415/924-3652
 OIS (to get an OIS ID and password, contact a DG field engineering telemarketing representative) 800/325-3065
 In Massachusetts 800/952-4300
 In Canada 416/823-7830

NADGUG membership, address changes
 NADGUG staff 508/898-4067

Information on RIGs or SIGs

Cathlene Gentry 512/345-5316

Editorial questions, comments, article suggestions

Greg Farman or Carolyn Kelly (please send product announcement to the address listed below) 512/345-5316

Information about advertising in FOCUS

Sharon Dennis 512/345-5316

Back issues of FOCUS

Turnkey Publishing staff 512/345-5316

Addresses: NADGUG staff

c/o Data General Corporation
 3400 Computer Drive, MS C-228
 Westboro, MA 01580

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c/o Turnkey Publishing,
 Stillhouse Canyon Office Park
 4807 Spicewood Springs Road, Suite 3150
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3	15	27	39	51	63	75	87	99	111	123	135
4	16	28	40	52	64	76	88	100	112	124	136
5	17	29	41	53	65	77	89	101	113	125	137
6	18	30	42	54	66	78	90	102	114	126	138
7	19	31	43	55	67	79	91	103	115	127	139
8	20	32	44	56	68	80	92	104	116	128	140
9	21	33	45	57	69	81	93	105	117	129	141
10	22	34	46	58	70	82	94	106	118	130	142
11	23	35	47	59	71	83	95	107	119	131	143
12	24	36	48	60	72	84	96	108	120	132	144

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4	16	28	40	52	64	76	88	100	112	124	136
5	17	29	41	53	65	77	89	101	113	125	137
6	18	30	42	54	66	78	90	102	114	126	138
7	19	31	43	55	67	79	91	103	115	127	139
8	20	32	44	56	68	80	92	104	116	128	140
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Philadelphia—Wyndham Franklin Plaza Hotel August 29—September 1, 1988

Many great things were born in Philadelphia!

NADGUG conference '88 will continue this tradition with four days of exhibits, seminars, roundtables, and talks that will put you in touch with the people and information you need.

Don't let this historic event pass you up!

*Register by July 29 and you'll be eligible to win a **DG/ONE**, qualify for a reduced registration fee **AND** receive complimentary Phillies tickets. Wyndham Franklin Plaza Hotel reservations also need to be made by this date.*

*By now **Conference '88** registration packet should be in your hands. If you can't find it, or have other questions, contact the NADGUG staff at 617/898-4078.*

*Where
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Conference '88

Data General has signed agreements with two new independent software vendors in the financial industry: International Treasury Systems (ITS) of Cambridge, Massachusetts, and Fame Software Corporation of New York. Data General intends for the agreement with ITS to provide intelligent front-office systems connected to back-office systems. ITS designs, manufactures, and markets front-end systems for the trading floors of banks, brokerage houses, investment banks, and other corporations. Fame Software Corporation is a subsidiary of Citicorp, and it manufactures data management software.

At a New York press conference, representatives from Data General, along with 11 other computer companies, endorsed the Open System Interconnection (OSI) standard as the multivendor networking standard of the future. The 11 other companies supporting the standard include: AT&T, Control Data, DEC, HP, Honeywell, IBM, Sun Microsystems, Telenet, Unisys, Wang, and Xerox.

Bob Tway, vice president of Eastern Operations, Don Tocher, director of the Data Communications and Networking Division (DCND), and Agnes Imregh, a senior manager within DCND, represented Data General at the press event that was sponsored by the Corporation for Open Systems (COS). Data General is an active senior research member of COS, which was founded in 1986 in order to accelerate the introduction of multivendor interoperable products and services based on OSI and ISDN.

Richard Martin has been named director of Systems Development within the Information Management Group. He will manage all information systems development programs supporting Data General's Financial, Administration, Marketing, and Sales organizations.

With 1987 revenues of \$135,300,000, SAS Institute's growth topped 32 percent, making the North Carolina-based software company the largest privately held independent software vendor in the nation.

SAS Institute has offices in Cary, North Carolina; Austin, Texas; and Lombard, Illinois; as well as 15 subsidiaries worldwide.

Hold your calls. The long-awaited

member roster will be ready shortly after the NADGUG conference in August. John Brudz, the former NADGUG president who pioneered the first roster, is tired of being asked when the next edition will be mailed. The roster will contain information based on the member surveys returned last May. More than 50 percent of the surveys were returned, so this year's roster will be considerably thicker—and easier to read.

The changing direction in service is a topic addressed at length by the *Service Market Analysis, Large and Small Systems* by Input, a market research and consulting firm that specializes in the computer service support industries. According to the report, although there has been growth in the past several years, service companies will face a slowdown in business, forcing a change in the industry. Overly competitive discount pricing has affected revenues, and these companies will have to find different areas to address. The study predicts that in the future hardware maintenance will become less of an issue, and the focus will shift to software support, systems optimization, network management, and systems integration.

For a copy of the report, write to Input at 1280 Villa Street, Mountain View, California 94041; 415/961-3300.

The Software Technical Operations group has been formed within DG's Software Business Unit (SBU), responsible for corporate software qualification, release, and support functions. In addition, the SBU has assumed responsibility for the company's worldwide requirements and strategies for software service offerings. This new group will be led by Peter Steinbach, manager.

The Software Technical Operations group will carry out a number of existing functions that are being transferred from the Systems Development Division and the North American Field Engineering (NAFE) Customer Support Center in Atlanta.

NADGUG counsel Peter Marx was in the news recently giving his expert opinion that the latest copyright ruling would not affect the outcome of several lawsuits currently in the courts concerning copyright infringement. According to *MIS Week*, the Copyright Office recently ruled that software publishers only need one registration per software, rather than register-

ing each software component separately. The move was intended to reduce paperwork in the Copyright Office, not affect protection.

Bleary eyes? In another bit of computer legislation, Suffolk County in New York first vetoed, then passed the first government regulation of video display terminals. That would have required businesses to offer 80 percent coverage for eye care for employees using VDTs a minimum of 26 hours per week, as well as increased work breaks and better work environment conditions.

Speaking of CRTs. . . . By the time you read this, DG will have introduced a new line of CRTs to replace its current Dasher series. The new tubes feature a slightly smaller footprint, updated styling, more usable screen area, a flatter screen, more controls and optional features, and a smaller price tag. More details next issue.

Farewells are in order for former NADGUG president Rene Dominquez, who got an offer he couldn't refuse and will be leaving Deutsche Credit Corporation soon. He is now the 1st vice president and director of Management Information Services for Van Kampen Merritt, a subsidiary of Xerox Financial Services based in Lisle, Illinois. His only regret is that it's a DEC shop.

Rational Data Systems and Intelligent Systems Development Corporation have announced a partnership in which both firms will operate as a single entity under the name Rational Data Systems. Under the supervision of ISDC president Pete Wiggins, the corporate headquarters in Glendale, California, will be responsible for sales and support of all products and systems.

Change you Rolodex. As of July 16, the area code for Data General in Westboro will be 508 instead of 617.

Rev 5 of DG BBASIC was scheduled for release at the end of June, and two of our sources actually had release tapes on their desks as this issue of *Focus* was going to press. The new rev is a 32-bit version, with few changes otherwise. Watch next month's issue for a full review. Δ

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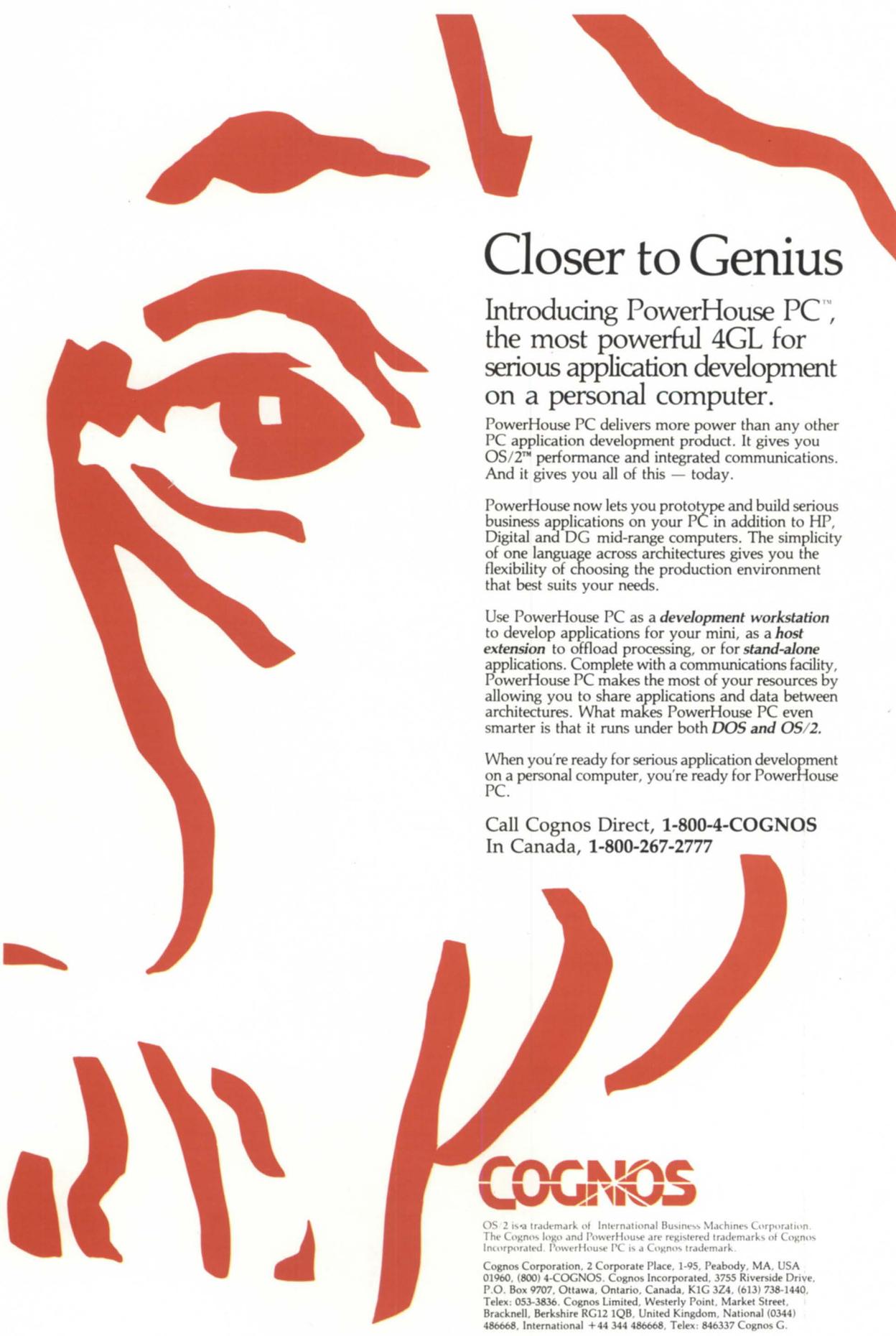
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