

# DECUS 12 BIT NEWS

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## NEWSLETTER SUBMISSIONS

Submissions are accepted at all times and are normally used int the next issue to go to press regardless of date of receipt.

Material submitted in machine readable form is particularly desirable because it can be edited and incorporated into the newsletter format more easily. Higher quality reproduction is also possible this way. Contact Bob Hassinger for further details on acceptable media and formats if you plan to make a submission in machine reacable form.

## IN THIS ISSUE

I got word this issue was due to go in less than a week before the deadline. This was the first had heard about publication plans since the last issue went in. As a result and due to the short time since the last issue reached you, the number of items is less than normal but they are interesting.

There are reports on 12 bit topics from he Spring Symposium, a report and commentary on the future availability of OS/278 for the DECmate II, an update on PASCAL-S and some news on current goings on from Wally Kalinowski and Louis Tribble. There is also a proposal from Wally and Louis about the future of 12 bit software with an invitation for your input - please respond.

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## FUTURE DEADLINES

The publishing plans for this new newsletter format are still in a state of flux. At this point it looks like I will be closing the next issues about the first of October and early in December. I know this will leave very little time after each issue arrives but the new system has added layers of overhead that make newsletter turnaround time longer than we used to have. Contact me if you have problems or questions about deadlines.

## PASCAL-S

The latest word is that PASCAL-S is still going strong. I believe the original authors are favorable to the English version being submitted to DECUS. At last report the DECUS submission was contemplated in the near future. More next time.

## SPRING DECUS SYMPOSIUM

One of the most interesting things at the Spring Symposium in St. Louis from the 12 Bit point of view was the news that the DECmate II was doing better than anyone had predicted. It seems that sales have exceeded all projections and the extra income is helping encourage a number of related developments that had been in the it-would-be-nice-if category up until now.

In the machine room we saw three DECmate IIs with 10 Megabyte Winchester disks (rather than the 5 Megabyte version that has been available for the other DEC personnel computer lines) and it was inside the CPU box rather than outboard as had been discussed earlier. We also saw a color monitor connected to a video board that does the same type of thing as the bit map graphics on the other personnel computers. This had not been a part of the DECmate II offering. Both these items were there and working for

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those who noticed them even though they had not been announced as far as I know.

The graphics board was running a series of demo programs that were said to actually be running under OS/278 - a very likely story since it would be hard to get the performance we saw any other way - (see notes on this subject later).

There was a strange hybrid system on the Winchester disks. The physical disk was broken into several logical disks. When you booted the system you came up in CP/M but if you knew the right magic you could boot one of the other logical disks and you found yourself in a somewhat unfamiliar version of OS/278 (the prompt character has been changed for example - why? the period has been good enough for the last 14 years and it is still good enough for RT-11 which copied it from OS/8). There was this little problem that if you got the magic wrong OS/278 was blown away, never to come back - by the end of the Symposium all the copies of OS/278 were gone as a result. This is not the way OS/278 would actually work on the DECmate II. You would never be required to have the CP/M option to get to OS/278. It was just an artifact of the unofficial demo system.

We had some interesting papers on PDP-8 base applications such as a news wire system with very stringent reliability and recover requirements. I hope at future Symposia we can get back to more user presentations like we used to have years ago.

We anticipate a session at the Fall Symposium giving an introduction to the OS/8 family. I hope that at the Spring Symposium more of us will be able to attend and we can have a more extensive program. Get busy now thinking about what you can do. Individual papers, user panels, workshop sessions, anything you think would be good. Contact me if you want help - the call for papers for the Spring Symposium will be out and due back very soon now! We have to get busy.

#### "DECmart"

During the St. Louis Symposium I was introduced to the latest thing in DEC marketing for PDP-8 systems and options - "DECmart". It is a "Computerized Shopping Service" that you dial into with a terminal. The system can give you descriptions, prices and availability, take orders, let you request a written quote or a call back and you can add your name to a mailing list. Both new and factory refurbished equipment is listed. The emphasis is on PDP-8 items but there are some non-PDP-8 items too. I found a good bit of useful information in the data base.

The system belongs to DEC's Traditional Products Group. I was told it is running on a PDP-11/60. I suspect that if it works out well for them, TPQ might expand the system to cover some of their other products lines.

To use the system, dial 603-884-4427 and connect your terminal through your modem. There is no logon required - the system just takes over and tells you what to do. Give it a try, you might find an interesting bargain or some helpful information.

#### OS/8 FAMILY RUMORS, REPORTS AND THOUGHTS

When the new DECmate II was announced at the Spring DECUS Symposium a year ago, there were no plans to make OS/8 family (OS/8 - OS/78 - OS/278 - etc.) software available for it. When I got up and asked about it at the Symposium, everyone looked at me as if I was from Mars. No, DEC had no plans then or in the foreseeable future. Why would anyone want OS/8 anyway?

Well, as we well know, there are a number of good reasons why one might want OS/8 on the DECmate II. When I looked into the subject further, I found that among the first things that had been done during the DECmate II software development was to get OS/278 working on it. This was needed in order to work on WPS and COS since the OS/8 family is the only available support for general purpose and assembly language programming of the 12 bit systems so DEC supports and develops the code for COS and WPS with the OS/8 family systems.

Finally, at the Spring Symposium this year, we heard a new tune from the DEC people. They had seen the light and were planning to release an improved version of OS/278 for the DECmate II. The only question was a decision on how extensive a project they wanted. How much new work on documentation to do and so on. The decision was to be made "within the next few weeks" and the product was to be ready in the Fall. Past experience made me worry a little about the sound of that but it was a whole lot better than anything before.

Since then a few things have come to light. It seems a lot of the package is working, including an upgraded version of BASIC. Unfortunately, at last report FORTRAN IV had not been patched to work on the DECmate II and it was not clear that anyone planned to include it in the new release - a great oversight I think. Worse yet, the new BASIC was reported to be working only on the DECmates and it was not clear that it would even run on the DECmate I when it was finally released. I am not clear about the status of other software or the operating system proper but it sounds like it is quite possible that there will be no compatibility with older hardware versions.

This is very disappointing! It seems the people making 12 bit decisions now at DEC have lost sight of the guiding principles of the past that helped make DEC's 12 bit systems and the OS/8 family the great success they have been. In the past the principle OS/8 development people were always firmly committed to new software being compatible across all the older systems. For example, when you run FORTRAN IV it checks the hardware and dynamically reconfigures to work with what it finds. This was not all that difficult to do technically, primarily it took a desire and commitment to being sure it was done. I think history has proven the wisdom of the pioneers who maintained the commitment for so long. The unusually strong compatibility from machine to machine and release to release did a great deal to popularize the 12 bit systems. Customers liked to know their software investment was protected. Lets hope today's developers and managers learn these lessons before it is too late.

STOP THE PRESSES - on deadline day for this newsletter as I am about to mail it off, I now get new reports from my contacts to the effect that the OS/278 project has run into funding problems and is on "hold". Lets hope

that this turns around and DEC gets on with the project, much of the software is far enough along for field testing, how much more could be needed to finish the job? Can't a multi-billion dollar company, second only to IBM, find a few dollars to enhance one of their most successful new products?

The DECmate II has been reported to be one of the few bright spots in a generally dismal sales year for DEC. Availability of OS/278 for it would further encourage sales. Using OS/278 avoids the need to buy a CP/M card and software for the DECmate II and it saves the slot that the board uses. It will not be long till the number of option slots in this machine will be a problem. Saving one will be increasingly important as more options become available.

There were a number of people at the Symposium this Spring concerned with the fact that they had OS/8 based software packages that they wanted to be able to continue selling. They need OS/278 on the DECmate II to do this. When they sell their packages they are helping boost DEC sales too.

There is also seems to be a more subtle point in favor of OS/8 for anyone interested in the details of how I/O is programmed at the machine level in this machine. For example, I want to interface a DECmate II to a digitizing tablet so that a lab that uses the system for word processing can also do a little data collection from time to time. This type of thing requires very close coordination of the I/O programming to be successful. The required control is not available under COS and WPS can not do the job at all. If I try to do the job with what DEC gives me with the CP/M option I will have to do use a CP/M BASIC program. This does not give the needed control either. Even if I go out and buy additional software to do assembly language programming of the CP/M processor I will find that I still cannot get the control of the I/O that is required.

The reason is that that the CP/M processor does not actually do any I/O with special software the user has no access to. The only I/O interface available to the CP/M programmer is at the level of CP/M's version of a device driver (and I have not even seen any documentation of that interface yet) - a line or buffer at a time. You can not use interrupts and all the rest of the facilities you need to really control peripherals and I/O. You can not even sit in a tight loop waiting for a each character to be input - a common and customary practice on small single users systems.

To do these things, you have to program the 12 bit processor directly and the only way to do that is in an OS/8 program written and run under the OS/8 family of operating systems and support software. Indeed, if I wanted to I could avoid writing an assembly language program and do my data tablet application under interrupts directly from an OS/8 FORTRAN IV program with all the control I need. The hooks and tools are there to do it. Applications that are tightly integrated with peripheral devices can benefit greatly from access to the OS/8.

What if I want to drive a particular device, perhaps a printer that has different characteristics for example? In OS/8 I just write or modify a device driver to do what I need. What do I do in COS or WPS or CP/M? Forget about it - that's what I do! I am stuck with what DEC gives me and

that tends be limited to support for current DEC hardware - take the LQP printers for example.

While the majority of DEC's customers are not going to get involved in this level of programming, having it available to the people who write software packages means it is possible to build and market very attractive programs that extended the usefulness of the machines and encourage sales. I know of a number of people who would like to market software products based on the DECmate II because it is such a good machine at the right price. Their efforts get an added marketing advantage from the fact that when you buy the DECmate II to run their package you can also get one of the top professional word processing system at the same time - not many other small systems can match that advantage. The key to availability of many of the software products I have heard about is the availability of OS/278 on the DECmate.

On the other hand - one hopeful thought - if DEC is not going to release OS/278 for the DECmate II, maybe someone will finally decide to release it to DECUS so the users can have the chance to maintain and enhance it. We (the 12 bit users) have asked many times over the years for this. When a software product is removed from the catalogs it should be released with sources to DECUS so it will continue to be available and can be maintained by those who still need it. There are many examples - MACREL, RTS-8, OS/8 V3D (DEC is working on the fifth version of OS/78 and OS/278 since the last release of OS/8 five years ago but people with PDP-8s still need access to it). As it is, the older material has been getting lost too often. I get many calls from people who need some piece of DEC software and find that despite any policy or procedure that says otherwise, they simply can not get it from DEC. In effect it is just gone and they have no where to go. Releasing the old software to DECUS would help the users as well as DEC.

#### IRONS IN THE FIRE

From: Wally Kalinowski and Louis Tribble

Eugene Lynch has just submitted versions two and three of his TKPLOT program to DECUS. TKPLOT replaces PLOT in the F4 plotting routines, allowing plots to be displayed on a Tektronix 4010 terminal and stored to disk for later plotting. A routine to execute stored plots is included. The revision was inspired by the recent availability of terminals suitable for use both as a console device and a 4010 (the original package assumed that the 4010 was not the console device). While at it, he added features for interactive programming.

Dr. Lynch is now working on implementing the symbiont for OS8, which will allow printing, plotting, and other tasks to run in the background without tying up the computer. The problems at Eckrohrkessel mentioned in the previous newsletter may soon be solved.

We came by a public domain copy of Spice, a large Fortran program from UC Berkeley which does electronic circuit analyses. If anybody out there has time to implement this on the 8, let us know.

We have been working on a reasonably elaborate macro library, etc. for Macrel and are interested in anything anyone else has done (we will try to contact Lars Palmer). Is there still any interest in a DECUS submission?

RE: CALL TO ARMS

From: Wally Kalinowski and Louis Tribble

We have decided to break the first rule of blissful ignorance: we volunteer. The consensus among the people we keep in touch with is that there is no more money to be made selling PDPB software. But there exist many really useful - even exciting - programs that are proprietary or haven't been submitted to the library. We think that if all interested parties (1600 people are on the 12 Bit Sig mailing list) kicked in ten or more dollars, we (DECUS) could acquire the rights to many of these programs and distribute them. Further, the DECUS library seems to be approaching critical mass, and something ought to be done about that. Hence, our proposal:

We are willing to do the necessary negotiating with the authors/owners of all the significant programs we can find. We will combine these with the current DECUS library (note 1) into a neat package (including all printed material) that is ready for distribution (note 2).

We have already arranged for some programs. Bill Haygood has offered sources for MULTOS8, a multiuser OS8 with background printing. Jim Van Zee has offered his wonderful high-density, high speed floppy handlers. We have a file transfer program that reads/writes ASCII or binary files of any size from/to a disk at up to 9600 baud. And, probably, Father Chase's revision of the Pascal S compiler will be available. See our other note for more programs that may be ready by the time this gets rolling. Programs we know of (most are still proprietary) include very nice editors, cross assemblers for various micros, a very good text formatter, Forth, a superior Basic, LDFocal, several choice handlers, a full Pascal compiler, and lots more.

What interested readers need to do is return the addressed questionnaire. If the response is adequate to justify the effort, we will collect money, set (by survey?) priorities, acquire software, and start assembling the package. If anyone knows of suitable software, please contact us. For example, who has copies, rights, or whatever for PFILES and BATCHM?

Note 1: Weeding the Library

There are many programs in the library that are either redundant or obsolete. When we package the library, we want to leave them out. We will pass them on to other evaluators (e.g. someone using paper tape), or to the DECUS archives. At any rate, we would list our choices in the newsletter.

Note 2: Distribution

There are two possibilities: DECUS or non-DECUS. We hope for the former. Our activities should greatly simplify the distribution problem. We will package in units of floppies (filling each) and for each unit, package the printed documentation in one folder. The number of floppies (20?) would be far fewer than there are now, and for floppy n, a clerk need

only grab folder n. For tape or hard disk, one or more floppy sized units could be placed on each reel or platter. As for reproducing the library on a PDP11, we have a suggestion for floppies. In addition to their other advantages, Jim Van Zee's handlers use a PDP11-compatible format, which means disks so recorded can be directly duplicated by a PDP11. For other media, a PDP8 is necessary, but if most people can handle floppies, perhaps volunteers can perform the conversion?

If DECUS refuses to distribute, then we can copy off some complete sets and will help organize volunteers to copy more (of course, these volunteers can expect to be sent media before they send copies!).