NEWSLETTER

PS/8 - OS/8 - OS/12 - DS/8

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Contributions and correspondence should be sent to:

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DECUS SPRING SYMPOSIUM

The OS/8 SIG has been active in coordinating the PDP-8 system software part of the program for the upcoming symposium in Boston. We plan to have a
* product panel on OS/8 V3, a product panel on SRT-8, a paper on DECsystem-8 vs OS/8 V3, a discussion of how the various system software fits into the overall picture and how the new software relates to the older versions. Of course we will also have our SIG Workshop/Meeting.

OS/8 VERSION 3

The long awaited release of Version 3 still has not quite come to pass. Oddly enough it is not the software development that is holding it up. At last report the new combined manual was running late and because there are so many new features in Version 3 it is not practical to release it till the manual is ready. The present outlook is for availability in May. Experience to date indicates that the new release will be worth the wait.

* SRT-8

* DEC is in the process of releasing a new software product called SRT-8 (Small Real Time system for the PDP-8). In its present form it provides a framework on which to build real time applications. It includes an executive that handles task scheduling and communications, some basic support tasks (TTY and LPT I/O, control, and OS/8 file I/O for example) and an OS/8 Background Task Running on a machine with the TSS-8 instruction trap (all extended memory 8E, 8F, and 8M's have it) this task lets real time jobs run in the foreground under interrupts while OS/8 runs in the background.

The potential of this system is great. In the past no one has come up with a nice general package for this sort of thing on the PDP-8. With the plan-
* ned extensions (task swapping on a disk, etc.) SRT-8 should be very popular. Incidentally, it is distributed entirely in source form!

*** SRT-8 is now renamed to RTS-8 (Real Time System).**

DECsystem-8 VS OS/8 V3

As you know, DS/8 is a modified version of PS/8. As such it is not compatible with some of the newer features in the OS/8 releases. Now that OS/8 V3 is coming with many of the features first introduced in DS/8 the question of where-do-we-go-now has come up. At the Fall meeting the authors of DS/8 and OS/8 got together and came to an agreement on the subject. A new version of DS/8 is now being developed that will be compatible with OS/8 V3 and will not require changes to OS/8 that could cause maintenance and compatability problems. The new DS/8 version will still support most of the nice goodies it has always had which are not in V3 (like HASP which gives a batch capability on 8K systems, the parameter block, and the super squash).

A RELOCATABLE MACRO ASSEMBLER

What the PDP-8 (and the PDP-5 and the PDP-12) have always lacked was a full-fledged relocatable assembler system. With one you could write modules of code once for all the common tasks you do in your programs and then just link-load them into your main programs, the same way you do with subroutines and functions in FORTRAN. The 8 family has always lacked a real MACRO assembler also. MACRO-8 has never really been used much except by people who wanted to generate floating point constants in their code.

My sources in Maynard say that initial design work on such a full scale relocatable MACRO assembler and loader is underway. At present DEC has made no commitment to produce this product but I think it has a good chance of happening. After all these years the 8 world deserves what most of the newer competition already has.

Anyone who has inputs to the design study should let me know. The development group has indicated an interest and willingness to consider users inputs. The goal is to make this the best assembler ever (at least for the 8 family). Because development is moving along quickly inputs should be made as soon as possible before the design gets too far down the road.

GENERALIZED OS/8 SORT

At the Fall Symposium there was a lot of discussion about generalized sort programs for the OS/8 environment. If you have enough equipment and can afford the software the COS 300 system has a good sort. It does not work well with small systems (i.e., two tapes and no disk), it's not quite OS/8 compatible, and it costs much too much. Another possibility is the sort program in the INVENT-8 package (DECUS 8-610). This sort will work on a single mass storage device (i.e., it could work on a single DECtape system) but it is slow and requires the data to be in a special format that is handled with FORTRAN II programs.

During the OS/8 SIG Workshop Clyde Roby announced that he had the kind of sort that is needed. I have now had a chance to look at it and it is very nice. It will work with just two tapes or other mass storage and it is faster than any other two tape sorts I have seen. It accepts standard OS/8 ASCII files (with fixed fields or free form fields separated by an arbitrary character like tab) and its output is the same format. Clyde uses the sort with other programs he has written to do tape management. He can generate a master index to all his tapes that are sorted on various things like file name or extension. For further information contact:

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MULTI-USER OS/8

EDUCOMP is developing a multi-user OS/8 system. We plan to have a discussion of their system at the Spring Symposium.

ALGOL FOR OS/8

Dr. Roger Abbott has developed an ALGOL-60 system for the PDP-8 which he calls ROGALGOL. It includes provisions for use under OS/8 and the write-up makes it sound like a nice piece of software. ALGOL has some very nice features in it that are not available in FORTRAN, BASIC, or FOCAL.

TD8e SOFTWARE

Has any one taken a hard look at the programming of the TD8e low cost DECtape? The standard driver routines to run it cannot be used with interrupts enabled because while reading and writing every machine cycle is needed to operate it. It seems possible that a routine might be written that could allow interrupts at certain times such as when the tape is searching or maybe very briefly between blocks during the actual reads and writes. If such a routine were possible it would make the TD8e much more useful in real time and multi-user applications where the interrupt needs to be on most of the time. If a short interrupt window could be opened from time to time teletype and some other I/O could be overlapped with tape operations. Let me know if you have any ideas, or know of any work in this direction.

NEW PROGRAM IN DECUS

DECUS	8-659	VTØ5	An OS/8 handler for fast VTØ5 Terminals.
	8-660	STAT	PAL-8 and FORTRAN IV extension of FOCAL statistical package.
	8-661	LESQ	General non-linerar least square Gauss-Newton method for determining best fit to a given non-linear curve.
	12-149	XPIP8	Provides essentially the normal PIP functions with the added ability to access OS/8 DECtapes on a PDP-12 with the TC12F option. This is a considerable improvement over the normal procedure of converting the DECtape to LINCtape formal and the reverse.
	12-150	XPIP10	Similar to XPIP8 but accesses PDP-10 format tapes as with PIP10.
	8-606a	PIP11	Revised version of program to access PDP-11 DECtapes under OS/8.

A patch has been submitted to correct an error in DISASM (8-639).

EDITOR'S NOTE

I would like to bring attention to the presentation scheduled during the Spring Symposium by Chuck Conley of Digital Equipment Corporation, Evaluating Software for Business Data Processing on a PDP-8.

Detail's on Chuck's presentation appear on page 46 of the Formal Program and Mini Papers for the Mini/Midi Sessions. Copies are available through the DECUS office.