THE mini-tasker

DECUS
RT-11 SIG NEWSLETTER

OCTOBER 1976 VOL. 2 NO. 3

The 1976 Fall Symposium will offer an exceptional opportunity for RT-11 users to meet with others to exchange information on hardware, software and maintenance.

There will be presentations by DIGITAL on RT-11 Extended Memory Support, the new High Level Command Language for RT-11, DECNET support in RT-11, as well as the RT-11 Product Panel. Laboratory system users should be interested in the LDP Product announcements and LDP laboratory software sessions.

Users will give papers on modifying RT-11 BASIC and on using RT-11 for language acquisition research. Of interest to all RT-11 users will be the User Application Panel, where users will show how they have applied RT-11 to solve a wide range of problems.

If anyone is interested in being on the RT-11 User Application Panel, contact should be made with either:

David Sykes
Mead Technology Laboratories
Dayton, Ohio

or

Tom Provost
MIT/LNS Bates Linear Accelerator
Middleton, MA

In order that this newsletter may be sent by first class mail, this issues' SPR section will be published in the next issue of the newsletter.

Following is a brief description of the Fall DECUS sessions that should be of interest to RT-11 users:

DATE/TIME	SESSION	DESCRIPTION
Mon/3:15-4:15	RT-11 High Level Command Language	Tutorial discussion of the new High Level Command Language planned for RT-11 Version 3.

Mon/4:15-5:15	RT-11 Product Panel	Interactive session discussing general plans for RT-11 futures.
Mon/5:15-7:15	PDP-11 Languages and Utilities	Discussion of current and future directions of languages and utility products.
Tues/1:30-3:00	RT-11 Extended Memory Support	Session devoted to a technical presentation of the support for extended memory, greater than 28K words, planned for RT-11 Version 3.
Tues/3:45-5:15	RT-11 User Application Papers	Interactive presentation by several users regarding applications utilizing RT-11.
Wed/8:30-10:15	RT-11 SIG	Interactive planning session for SIG matters.
Wed/10:15 - 10:45	DECNET - RT	Presentation of plans for DECNET support in RT-11.
Wed/10:45 - 11:45	RT-11 Papers	Presentation of an RT-11 based system for behavioral science research.
Wed/2:00-3:00	MACRO-11 Tutorial	Tutorial presentation describing new and interesting programming techniques with MACRO-11

Many other sessions will undoubtedly be of interest to RT-11 users, and we expect some "Birds of a Feather" sessions as well.

The following communication was received from Dr. Charles L. Feldman

> In reading the DECUS RT-11 sig. newsletter of July, 1976, In noticed that various people had volunteered in-house introductory documentation to RT-11. We have a frequent need here at WPI to get people on-line very rapidly and would be most appreciative if you could either send us a copy of those things which have been sent to you which you consider worthwhile or if you could tell who has this introductory documentation so that we could request it directly ourselves. Though we could obviously generate it ourselves, I am a bit reluctant to re-invent the wheel.

Anyone who can be of assistance please contact

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INSTALLATIONS

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Contact: James W. Cooper
Assistant Professor

At the Tufts University Chemistry Department, we have a PDP-11/40 with LPS-11 reader-punch, EIS, FIS, LA-30 DECwriter and 24K memory, 16K of which is CMI memory. We are also connected to the campus PDP-10 by a 2400 band line and do most of our programming on the 10 using MACY11.

The principle use to which our 11 is put is educational: it is used in a course on the minicomputer in the laboratory, where students learn to program it to acquire data from gas chromatographs and to do titration experiments. We have also been using it in some research regarding the systematic noise in the Fourier transform and will be using it in the future for correlation nmr spectroscopy attached to our Varian HA-100.

We encountered the usual number of start-up bugs, including the fact that the paper tape assemblers, suitable for student use at first, did not support EIS or FIS instructions. We also found that the old LA-30 DECwriter is a dreadful beast with incredible mechanical problems which we encounter whenever we shut it off. We therefore leave it on constantly.

We also found that DEC documentation regarding the 11 in general and the LPS-11 in particular was extremely poor for use by the novice student programmer and accordingly, we have prepared a textbook entitled "The Minicomputer in the Laboratory: With Examples Using the PDP-11," which will be published by Wiley-Interscience in January, 1977. It covers all elementary programming and number theory, FPMP11, the LPS-11 and many common programming problems encountered in the laboratory.

LANGUAGES

Our user group represents over 35 PDP11 installations from 11/70 down to LSI-11's. We have over 100 Naval Weapons Center people on our mailing list.

The purpose of this letter is to convey to DEC our interest in having the programming language, Pascal, available on PDP11's in RSX and RT11.

We are interested in Pascal because it is a good, clean implementable language and because it is increasingly available. For example, we are now seeing people here at NWC who have learned Pascal while attending college. Also higher level Navy management has expressed interest in Pascal. We would like to further suggest that DEC use Pascal as their system programming language instead of BLISS since Pascal is more widely known and easier to understand.

For the last few months some of us have been using the RT11 Pascal from:

Electro Scientific Industries, Inc.
13900 N.W. Science Park Drive
Portland, Oregon 97229
(503) 641-4141
Attn: David Rowland, Manager, Programming

We have been having generally good luck with Pascal. This implementation has several interesting features which we feel you should consider in your implementation. Variables can be declared so as to place them anywhere in memory and integers can be expressed in octal by appending B. For example:

```
VAR  SWR  ORIGIN  177570B: INTEGER
```

We also like the ability to output the generated assembly language on the listing if desired and also the ability to intermix Pascal and assembly language. The intermixture of Pascal and assembly language is especially convenient in this implementation because the compiler examines the assembly language variables. If they match the Pascal variable, the compiler replaces them with the numeric offsets. This capability makes it extremely convenient to write Pascal procedures that have the capability to manipulate the hardware at its very lowest levels. An additional asset of the E.S.I. version is its ability to output in-line code for the 11/45 floating point unit. Of course all the other model PDP11's are also supported.

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