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MEMORANDUM

To: 12 Meter Computing Report Series

From: P. R. Jewell

Subject: Creating POPS Procedures Using the VAX Text Editor

Executable procedures are the most powerful asset of the POPS-based LINE and CONDAR data analysis programs. LINE and CONDAR users have two options for creating procedures. The first option is to use the POPS procedure editor (described in the Reference Manual) to create and edit procedures. The second, and currently preferred method, is to use the VAX text editor to create the procedure, and to save it as a permanent disk file.

The VAX disk file method has three big advantages over the POPS on-line method. First, procedures created with the on-line POPS editor will disappear when you exit the program unless you remember to STORE them; procedures created with the VAX editor are saved as VAX disk files that can be easily reloaded into LINE or CONDAR. Second, the VAX editor is much more friendly and powerful than the POPS editor. VAX disk files can be easily reedited and saved under the same or a different file name. Finally, any VAX disk procedures you create will be copied to the VAX subdirectory [OBS.PROCEDURES] and can be reused on subsequent observing runs. This said, the POPS on-line editor may still occasionally be useful for short, "one-shot" procedures that you are certain that you don't want to save.

Here are instructions for creating and editing VAX disk file procedures:

1. STARTING THE VAX EDITOR

You have two choices here:

- a) From within LINE or CONDAR, type

EDT

You will then be prompted for a file name. The file name should generally (but not necessarily) have the same name as the procedure itself. *It is necessary that the file have the extension .PRC.* For example, TEST.PRC is a valid procedure name. After entering the file name, you will be "spawned" into the VAX EDT editor. At the conclusion of the editing session, you will be returned automatically to LINE or CONDAR and the POPS > prompt will reappear.

- b) Should it seem more convenient, you can EXIT the LINE or CONDAR program. When the VAX \$ prompt appears, type

EDT filename.PRC

and the EDT editing session will commence.

Note: The EDT editor can be used to create a new file or edit an existing one; the commands for invoking the editor are identical in either case.

2. SOME SIMPLE COMMANDS FOR THE VAX EDT EDITOR

The EDT editor is a full-fledged text editor with many capabilities. A complete VAX manual is available at the telescope that describes EDT. One only needs to know a few basic commands to use EDT in its simplest mode. Here are a few pointers:

- a) When EDT starts, an asterisk (*) will usually appear. This indicates that you are in the line editing mode. If you wish you may begin to enter text (but see the description of the screen editor below) by typing

I <RETURN> (meaning INSERT)

Type each line of the procedure, and hit <RETURN> at the end of each line. To conclude the editing session, type

CTRL Z (i.e., hold down the 'control' key and hit Z)
EXIT

- b) Most people find the screen editing mode more convenient and flexible than the line editing mode. To use the screen editing mode on a Modgraph Text/Graphics terminal, you must first insure that the terminal is in the VT100 text mode rather than the TEK 4010 graphics mode. The modes are controlled by the terminal function key labeled "GRAPH/TEXT" or "DATA/TALK." You can go back and forth between modes by simply toggling the keys. If you are in the text mode and the EDT * has appeared, then type

C <RETURN>

and you will be in the screen editing, or "Change" mode. To enter the procedure, simply begin typing. You can move anywhere in the typed material by using the terminal arrow keys. To conclude the editing session, type

CTRL Z
EXIT

3. COMPOSING THE PROCEDURE

The body of the POPS procedure should conform to the ordinary rules of syntax described in the Reference Manuals. That is, the procedure should begin with the statement

PROCEDURE procedure_name

and should conclude with the two statements

```
RETURN  
FINISH
```

The "RETURN" statement isn't mandatory, but it will allow the procedure to be called by other procedures, and is so it is good practice to include it; it costs nothing to do so.

4. LOADING THE PROCEDURE INTO LINE OR CONDAR

If you edited the procedure by spawning EDT from within LINE or CONDAR, you will be returned to the analysis program automatically at the conclusion of the editing session. If you invoked the editor outside the analysis programs (\$ prompt level), you will need to restart LINE or CONDAR. Once the programs are running, you can load your disk file procedure by typing

```
INSTALL filename
```

The procedure will be listed on the screen as it is being compiled into the program. Once loaded, it is ready to be run. If you need to edit the procedure, you can invoke the EDT editor by typing

```
EDT
```

as described above. Before re-INSTALLing the procedure, you should scratch from memory the previous version by typing

```
SCRATCH procedure_name
```

CAVEAT: If the procedure contains array declarations, the array names will not be scratched. To erase them from memory, you must RESTART.

DISTRIBUTION:

12 Meter Computing Report Series Notebooks (Telescope, Tucson, CV)
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