

BOOK REVIEWS

Anyone willing to review books for the Newsletter or wishing to suggest books for review should write to Dr. Harry E. Pence, Department of Chemistry, SUNY at Oneonta, Oneonta, NY 13820.

AN OVERVIEW OF UCSC p-SYSTEM

Reviewed by Brian Pankuch*

The following two books cover the UCSD p-system. The p-system is a sophisticated but relatively easy to use operating system. It is the tool that enables you to use your computer in such areas as running application programs, writing your own programs, keeping track of your files, or using your computer as a word processor. You can use Pascal, FORTRAN, BASIC or assembly languages singly or in combination in a program under the p-system. I have only used Pascal and assembly languages together, but all other combinations are well documented. Independent studies of operating systems rank the p-system to be as good or better than competing operating systems. The p-system appears to be the best for transporting programs between different machines. My own experience has been transferring Pascal programs among Apples, Teraks, and Sages. Although I have not found it easy to electronically transfer programs due to the many ways in which the RS-232 port is used, once transferred, programs have worked. However, programs containing graphics can have problems.

The p-system is particularly well suited for transferring programs since it is available on virtually all micro and minicomputers. It is comforting to know that you can purchase a new computer and have your old programs work on the new system, and you can share programs with colleagues without major revision.

I've found the time invested in learning this operating system well spent. Many time-saving techniques are available; to that end, you may find one or both of the following useful.

INTRODUCTION TO THE UCSD P-SYSTEM

by Charles W. Grant & Jon Butah
SYBEX, 1982, 300 pgs., \$15.95

The two authors are a computer scientist and a writer with teaching experience, respectively. Their collaboration results in a book which is comprehensive and readable. The major parts of the p-system, the editor and the filer, are each given a full chapter. Each available command is covered, with auxiliary information as needed to explain practical examples. This is unlike the usual manual, which covers one subject assuming you know all other topics bearing on the subject, and results in hours of hunting through inadequate indexes.

When using the editor, with a few keystrokes you can change to a word processing mode. This is quite useful for all types of memos and reports. It is handy since you use exactly the same editor commands for word processing as for writing your own programs. Unless you are a very heavy user or have total recall, decreasing the number of sets of editing commands you need to remember is a blessing. With one diskette and one set of commands, you can do all you need to, and you don't need to purchase a separate word processor.

A professional word processor has many additional features, but I've found the above quite adequate for memos and reports. Illustrations showing you exactly what should be on the screen are used extensively and make the numerous examples clear.

Additional information is given on writing small and large programs. Many useful hints are given on optimizing the running and storing of programs. Although the examples given in this section are in Pascal, they are usually under 6 lines in length and written to be understandable even if you don't know Pascal. In general, good techniques for logical program development also optimize run-time and storage requirements. An example from Pascal would be using local variables instead of global variables whenever possible.

If you are new to the p-system this book will be a great help. A number of the examples will open a few new vistas to experienced users. Overall, this is a readable book which does exactly what it proposes - gives the reader an introduction to the UCSD p-system.

PERSONAL COMPUTING WITH THE UCSD p-SYSTEM
by Mark Overgaard & Stan Stringfellow
Prentice-Hall, Inc., 1983, 448 pgs., \$16.95

The book is divided into three parts. The first is an introduction to the most useful and most used aspects of the p-system. General information on computer diskettes and hard disks is discussed, and sufficient background is provided to allow you to grasp the interconnections between the various pieces of hardware and software.

The tutorial style takes you logically through the steps you need whether using a purchased application program, writing your own program, or using the system as a word processor. This part of the book is not comprehensive. It gives you a very practical method to get the above type of tasks done and references sections in the second part of the book for in-depth coverage.

In the second part of the book, the operating system, editor and filer each has a chapter. In addition to a comprehensive overview, each command available from that level is listed alphabetically and covered completely. The major advantages of these descriptions over those in the manuals that come with your computer are a more readable style and many more examples. The examples are straightforward and generally independent of a particular language. Where the examples are language dependent, separate sections for Pascal and FORTRAN are presented.

The third part covers modules, p-system programming tools, debugger tools, and generally gives you a better feel for program development. This part is only about 30 pages in length and is not done with the detail and helpfulness of the first two parts. It reads much more like the usual manual. This is unfortunate since the topics are quite important.

Both authors are associated with SofTech, the group which markets the p-system. They have a number of ways of doing things which save a lot of effort. For example, my present computer, a Sage II, has 640K Bytes available on diskettes. It is surprising how many different files you can store in this amount of space, but removing old files can be a chore since you can't see all the file names at once. It is really tiresome typing out each complete file name. The authors suggest using wildcards. Going to the Filer and using the Remove command with the ('?') wildcard will step through each file on the diskette and ask if it should be removed. Responding with a "y" or a "n" will respectively leave or remove the file. This is easier and faster. Other tidbits discussed include the ability to transfer output or files from the console to your printer or to a diskette from the middle of a program. This and many other helpful procedures are outlined.

To sum up, the first book is simpler and a good introduction; the second is more advanced and perhaps a bit more difficult, but covers more. Both are better written and much easier to use than any other manuals I've seen.

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