

## Setting Up the PDP Software on the PC

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In this appendix we describe the procedure for unpacking the PDP software for use on PCs and other MS-DOS computers. We first describe how the files are organized on the two diskettes. Then we explain how to set up working directories and how to unpack the software from the diskettes and make it ready for use. The discussion assumes some experience with MS-DOS. To unpack a single program, you can skip directly to the end of this appendix, where a script is given.

### Organization of the Diskettes

Each diskette contains a number of *archives*. There is one archive for each simulation program, one archive called *utils.arc* for the **plot** and **colex** utility programs, and one archive called *src.arc* for the source files. The name of each archive file ends with the *.arc* extension. Disk 1 contains *iac.arc*, *cs.arc*, *pa.arc*, *bp.arc*, and *aa.arc*. Disk 2 contains *cl.arc* and *ia.arc*, as well as *utils.arc* and *src.arc*.

Each archive consists of a number of files that have been compressed and then stored together by a program called ARC. Each program archive contains the PC-executable version of the corresponding program, as well as all the pattern, network, start-up, template, look, and weight files that may be needed to run the examples described in the various chapters of this book. The *utils.arc* archive consists of the executable versions of **plot** and **colex**. The *src.arc* archive consists of source files for each executable program and for the routines that make up the various general routines described in Appendix F, as well as files containing commands that allow

these programs to be recompiled, as described in Appendix G. Appendix G also describes recommended procedures for users who wish to port the software to UNIX systems.

## Setting Up Working Directories

Generally, it makes sense to set up a working directory for each simulation program. If you have a system with no hard disk, you will have to create these on a floppy. As a rough guideline, a double-sided, double density 5¼" floppy disk will hold two programs comfortably. Thus, you might put directories for the *iac* and *cs* programs on one floppy, *pa* and *bp* on another, *aa* and *cl* on another, and *ia* on a floppy by itself. The *plot* and *colex* programs, if you find you wish to use them, should normally be placed either in the directory where you wish to use them or in a directory that MS-DOS will check in looking for executable programs. The source files take up rather a lot of space and may have to be placed on a disk by themselves.

It is a good idea to have a working copy and a back-up copy of all of the software so that if anything happens to either copy you have the other. From this point of view it makes sense to set up working directories for all the programs right away, and then to put away the distribution disks for safekeeping. Alternatively, you might simply want to use the MS-DOS DISKCOPY utility to create back-up copies of the distribution floppies, and unpack archives as you need them.

If you have a hard disk, it makes sense to place each program in a sub-directory of the the same parent directory. For example, you might create a parent directory called *pdp*, with subdirectories called *iac*, *cs*, and so on.

Working directories are created using the MS-DOS *mkdir* command. For example, to make a directory called *iac* on a floppy disk in drive B you would enter

```
mkdir b:\iac
```

or you could connect to drive B by entering

```
b:
```

and then simply enter

```
mkdir iac
```

Of course, the floppy must be formatted before the *mkdir* command will work. See your MS-DOS documentation for formatting instructions if necessary.

Once you have created the appropriate directories, unpacking the software is extremely simple. You place the diskette containing the archive you wish to unpack in drive A of your PC. Make sure the target directory is in place either on your hard disk or on a floppy installed in drive B. Enter

*a:*

so that your working directory becomes the top level directory on drive A. Then enter

*arce arcname destdir*

where *arcname* is the name of the archive you wish to extract files from and *destdir* is the name of the directory you wish to place the files in.

For example, to extract all the files from *iac.arc* and place them in a working directory called *iac* on a floppy disk in drive B, you would enter

*arce iac b:\iac*

To extract all the files from *src.arc* and place them in a directory called *pdp\src* on your hard disk (drive C), you would make sure disk 2 was in drive A, and then you would enter

*arce src c:\pdp\src*

Once you have set up a working directory for a program, you may move to that directory with the *cd* command and begin to work. Thus, to use the *iac* program, assuming you have unpacked it to a directory called *iac* on a floppy in drive B, you would enter

*b:*

*cd iac*

Note that *arce* is a simple version of the ARC program that is only able to extract files from archives. Some further information about it can be obtained by entering *arce* when connected to the drive containing either of the two floppies.

### A Script to Unpack a Single Program

The following sequence of actions will set you up to run the *iac* program. If you wish to set up a different program, just use its name instead of *iac* in what follows.

1. Put a formatted floppy disk into drive B.
2. Create a directory for the *iac* program by entering  
*mkdir b:\iac*
3. Put disk 1 of the PDP software into drive A.
4. Connect to drive A by entering  
*a:*
5. Unpack the files by entering  
*arce iac b:\iac*
6. Connect to drive B by entering  
*b:*
7. Change to the *iac* directory by entering  
*cd iac*