

Maintaining the Directory System

Each standard disk process (and who knows what other weird processes) contain the directory system subprocess, named DIRSYS . At IPROC time a subprocess named DIR1 (d-i-r-one) creates the operations to call DIRSYS and also creates and initializes various global data structures used by the directory system.

For each of the two subprocesses DIR1 and DIRSYS, the following kinds of files exist:

- (i) One or more source files,
- (ii) A file of relocatable binaries, one record per assembly,
- (iii) An absolute overlay (actually a core image).

As we all know these files should not be altered except when a debugged, certified new version is to be installed; then old and new incarnations of each affected file (source, relocatable, absolute) should be (as nearly instantaneously as possible) SHAZAMed.

In the following, all filenames not explicitly qualified with a pathname are in the directory TSS:DIRECTORY.S -- this directory also has hardlinks to every other file needed to assemble any part of the directory system. Thus a reasonable way to work is to CHAIN one's temporary directory to TSS:DIRECTORY.S .

I. DIR1, the initializer subprocess.

A. Load modules constituting DIR1 --

- 1. DIR1 (subprocess descriptor, data area, executable code)
- 2. DRCTCL (template describing global structures used by the directory system)
- 3. OPERCL (the standard operations clist template)

B. Assembling modules of DIR1. The relocatable binary file corresponding to DIR1 is TSS:BIN:DIR1BIN ; it (or better still, a copy of it!) is updated with the COPYL utility whenever modules 1.-3. above is reassembled.

1. DIR1

- a. Source on DRCTSIS
- b. Xtext from SYSMAC

TSS:XTEXT { SYSSUBP
 BOBBITS
 TYPES
 TSS:OPERATIONS.S:DIROPS

2. DRCTCL -- See section II.B.4. below.
3. OPERCL -- See writeup on OPERCL maintenance. The relocatable binary is on TSS:BIN:OPERCL .

C. Loading DIR1:

1. Load TSS:BIN:DIR1BIN (or an updated version).
2. Overlay onto TSS:CODE:DIR1 (or a test version).

II. DIRSYS, the user directory subprocess.

A. Load modules constituting DIRSYS --

1. DESCR (subprocess descriptor, scratch area)
2. DEBUG (breakpointer, etc.)
3. CONSTS (shared IP-lists)
4. DRCTCL (template describing global structures)
5. OPERCL (template describing the regular operations clist)
6. IO (subroutines for opening and closing disk files)
7. SUBRS (miscellaneous subroutines)
8. ACTIONS (entry/exit, main body of code)
9. LAST (error generation, "window" region, FL definition)

B. Assembling modules of DIRSYS. Here the relocatable binary file is named TSS:BIN:DIRBIN .

1. DESCR
 - a. Source on DESCR
 - b. Xtext from MISCMAC
TSS:XTEXT:SYSSUBP
TSS:OPERATIONS.S:DIROPS
2. DEBUG
 - a. Source on DEBUG
 - b. Xtext from TSS:XTEXT:SYSCALL
3. CONSTS
 - a. Source on CONSTS
 - b. Xtext from SYSMAC
TSS:XTEXT:OBBITS
4. DRCTCL (Note: the relocatable binary for this module should be put on TSS:BIN:DRCTCL as well as updated in TSS:BIN:DIRBIN .)
 - a. Source on DRCTCL
 - b. (No xtext used.)
5. IO
 - a. Source on IO
 - b. Xtext from MISCMAC
SYSMAC

6. SUBRS

- a. Source on SUBRS
- b. Xtext from MISC MAC
SYSMAC
DIRDEFS

7. ACTIONS

- a. Source on ACTIONS
- b. Xtext from MISC MAC
SYSMAC
DIRDEFS
TSS:OPERATIONS.S:DIROPS

8. LAST

- a. Source on LAST
- b. Xtext from MISC MAC
SYSMAC
TSS:XTEXT:ERRNUMS

C. Loading DIRSYS.

1. Load TSS:BIN:DIRBIN (which has presumably just been updated).
2. Overlay onto TSS:CODE:DIRSYS .