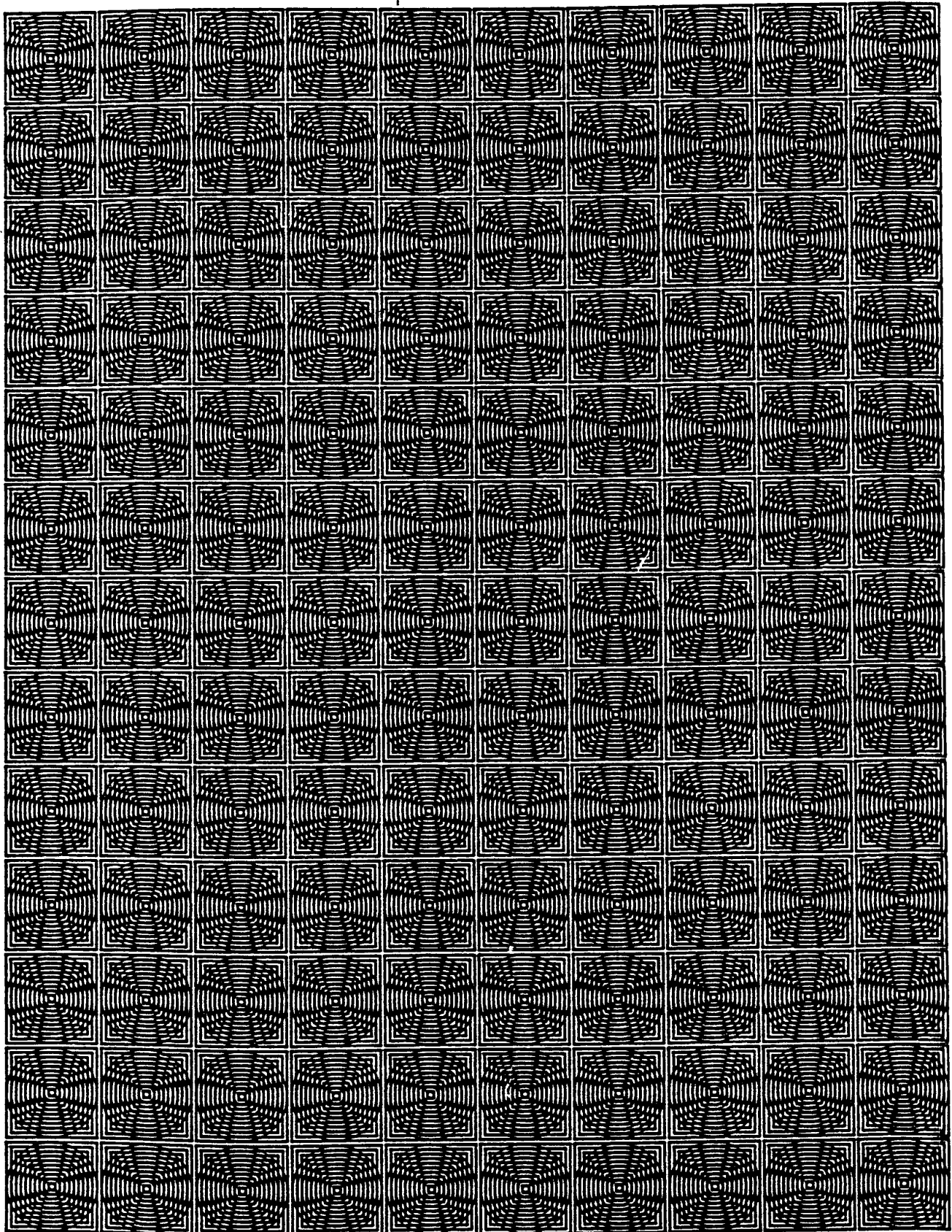


WorkShop A4 7 Feb. 83



"LisaWorkshopA4MemoFeb83-0.PICT" 595 KB 2001-05-01 dpi: 300h x 300v pix: 2323h x 3088v

APPLE INTER OFFICE MEMO

From: Barry Haynes and The Development Group.

Date: 2/7/83

Subject: Release A4 of the WorkShop (Previously LDS, Tippe, OSDS, etc.).
I hope this name sticks!

To: John Couch, Wayne Rosing, POS Software, Pubs, NPR, Tech Support,
European Tech Support, Bill Libby, Paul Zemlin, Dan Cochran.

Documentation: Complete Documentation for this release requires the
LDSA2 Release Memo and this release memo. The additions to LDSA3 over
LDSA2 are included at the end of this memo. Also look for the new 'WorkShop
User's Guide' that should be available from Pubs in the next few weeks.

OVERVIEW OF RELEASE

This release of the WorkShop is for the OS 5.6 series and is compatible with
the A4.1 release of the Applications Software. It may be used with OS 5.6.2,
or any later compatible versions.

WorkShopA4 was built with itself. You can use WorkShopA4 to build software
for ANY intrinsic world even if the segmentation for the new world is
different! You can optionally tell the Compiler, Generator and Linker which
intrinsic library to use to do a build. This allows the current generation
of software to run on a current intrinsic world while it is being used to
build software for any different intrinsic world. This allows the WorkShop
development system to be used to build software for A5, A6, etc.. There
is not a need to wait for a new development system just because a new release
of the applications comes out.

This memo is not a complete description of the system. It gives a
description of how to bring up the WorkShopA4 and the differences between
LDSA3 and this A4 version. If you have not used the WorkShop (LDS) before,
it would be wise to read the LDSA2 release document and this memo before
beginning serious use of the WorkShop.

SUMMARY OF FEATURES ADDED TO WorkShopA4 SINCE THE LDSA3 RELEASE

1. Undo is now supported in the editor. Accidentally hit space and destroy
a few procedures; no problem, just choose Undo! The editor menus
have also been changed to be more like the office system.
2. The WorkShop System Manager now allows you to choose which processes will be
resident. Resident processes are not killed when they finish so they
can be restarted instantly without waiting for an OS Make Process cycle.
Any process can be made resident without recompiling or changing the
source in any way. There is a whole new Process Management section in
the System Manager allowing you to display the status of all processes,

kill processes and change the set of resident processes. You can also run processes in the background using the 'MakeBackground' command. The cover sheet to this memo was printed in the background on an HP Plotter while Johan Strandberg was editing a program in the foreground.

3. New exec file pre-processor functions:

Exists(filename) (True if a file exists)

Newer(filename1,filename2) (True if file1 is newer than file2)

4. Automatic mounting and unmounting of twiggies.

5. Most WorkShop shell commands can be aborted using command period.

6. New TransUtil supports use of Monitor twiggies without a Monitor hard disk on line. Reads and writes all blocks of Monitor twiggies correctly. Supports Large format Monitor directories.

7. In the File Manager, under the FileAttributes section, the ClearAttributes command clears the OS file attributes S,C and O. It can be used with wildcards.

8. The WorkShop Shell prints out meaning of all OS error messages.

9. The Names command in the File Manager lists the names (only) of the files on an OS volume. This is MUCH faster than using the List command which gives you more info about the files.

10. The compiler speed has been increased by Al Hoffman approximately 20%. This number was obtained by comparing the A3 and A4 compilers as they compile themselves. The speed improvements for large programs that use many units may be even greater.

11. Init in the File Manager gives a warning if there is already a valid OS volume there. Init allows you to optionally specify the maximum number of files that can be on the volume. Init mounts volumes at the end of initializing them.

12. Heap errors are returned by HEAPRESULT function. Works like IORESULT.

13. Printer can be attached to any port, not just SLOT2CHAN2.

14. File copying is faster because:

a. It now pre-allocates the space.

b. The default is now to not verify (reread source and destination to be sure copy was done without errors). This is much faster! If you are concerned, the OS shell has never verified. If you are still concerned, you can change the default to verify using the Validate command in the system manager.

15. The white power button will exit the WorkShop if it is pressed while using the shell.

16. A check for existence of the destination volume is done before going through the long selection sequence and finding out the destination is not mounted. This lowers the frustration level for the WorkShop user.

17. Exec files stopped ~~by~~ Command Period.

18. Many other smaller features added to the system.

LISA3 BUGS FIXED IN WorkShopA4

1. Prefix is correctly set at boot time even if other than boot volume.

2. Twiggies not ejected if files are open.

3. One can now enter lower case file names without having them converted to upper case.

4. Many other bugs fixed.

GENERAL COMMENTS

1. This release is essentially code complete. Except for minor cosmetic changes and bug fixes, the WorkShop will not be changed between now and 1st customer ship. The final Manuals will be based on this release.
2. Talk to Al Hoffman about:
 - the Compiler, Code Gen
 - See Ken for questions about:
 - Linker, IManager
 - Talk to Ron about
 - Diff, Dumpobj, Bytediff and other utils.
 - Talk to Yu-Ying about:
 - the Paslib.
 - Susanna about:
 - the Assembler.
 - Marianne about:
 - Basic.
 - Talk to Barry Haynes about:
 - the LDS Manager, File Manager, System Manager.
3. There is a final draft of the LDS Reference Manual on the way from Larry Roth in Pubs. I'm sure he will explain things in greater detail and I bet he can spell a lot better than I can too!

NOTE: Starting now, I will be working on the tool kit full time. I will help out for a while with development system issues, but expect someone else to take over as AS, AG, ... RELEASE COORDINATOR AND SHELL IMPROVER.

THINGS TO WATCH OUT FOR

1. Make sure you configure the printer before using it.
2. Make sure you understand how to use the FilesPrivate command in the System Manager to decide if you want to look at files beginning with 'C'.
3. Make sure your printer is configured using the preferences utility and the printer DIP switches are set up properly. The proper settings are:
 - SW1 - 7 and 8 closed, all others open.
 - SW2 - 7 closed, all others open.

NOTE: PRODUCTION SETTINGS SHOULD BE:

SW1 7 CLOSED } ALL OTHERS
SW2 7 CLOSED } OPEN

REMOVAL OF MONITOR SUPPORT

THIS IS COMPATIBLE WITH THE OFFICE SYSTEM.

Monitor support has been removed from the OS and WorkShopA4. The new TransUtil utility that will be released with WorkShopA4 has Monitor support in it. It can be used to do wildcard copies of files to and from the Monitor. It also does directory listings. The new TransUtil supports mounting Monitor twiggies without having a Monitor hard disk on line. It also supports access to large Monitor directories. It will correctly read and write all blocks on a Monitor twiggie since the problem with the OS remap of blocks 1215 to 1232 has been worked around.

DEFINITION OF COMPATIBLE A4 SYSTEMS

The WorkShopA4 release initially contains A4.1 versions of:

1. Sys1Lib.obj
2. Sys2Lib.obj
3. Fonts.lib
4. Iosfplib.obj
5. Fm.os.heur
6. The intrinsic.lib from the A4.1 release with all the A4.1 librarys

installed + Objlib.obj and SULib.obj installed. The latter two libraries are used by WorkShop only. There is also an improved but reusable version of the iospaslib that comes with WorkShopA4 and is installed in the WorkShopA4 intrinsic library. These improvements are necessary for proper performance of WorkShopA4.

Your system is COMPATIBLE if you are using the standard A4.1 libraries and the UNMODIFIED A4.1 Intrinsic.Lib. Read both of the following sections carefully to determine how you should bring up ~~DBS.~~
WORKSHOPA4

INSTALLATION PROCEDURE FOR COMPATIBLE A4.1 SYSTEMS

If you are not already up on OS 5.6.2, you can use the WorkShop release to bring up OS 5.6.2 and WorkShopA4 by initializing your profile from the shell then Copying all the files on the WorkShop diskettes or the WorkShop profile to your profile. This procedure can also be used to get a copy of the WorkShopA4 plus the A4 office system. Amy has a profile with both systems installed if that is what you want. In either case, the procedure for doing this is:

1. Boot the WorkShopA4 release profile from PARAPORT or from the WorkShopA4.a twiggy in UPPER. Make sure your profile is in SLOT2CHAN2. Enter 'S' for System Manager followed by 'F' followed by 'Y'. This will set up the shell so files that begin with '{' will be included in the list of files to be copied. Enter a 'Q' and continue.
2. Enter an 'F' for file manager.
3. Enter an 'I' for Init followed by 'SLOT2CHAN2'.
4. Enter an 'C' for Copy.
5. Enter '=-slot2chan2-\$'.
6. If you are doing this from WorkShopA4.a, also mount WorkShopA4.b in LOWER then enter 'C' for Copy followed by '-lower=-slot2chan2-\$'. Do the same for WorkShopA4.c
8. Enter 'Q' to quit the File Manager, 'Q' to quit the shell, 'Y' and finally 'P' for power off. Plug your profile into paraport then push the white button on the Lisa to boot your profile.
8. Enter 'F' then a 'D' for delete followed by 'SYSTEM.CONFIG'.
9. Enter a 'Q' followed by an 'S' for System Manager followed by a 'P' for Preferences. Set up all the preferences for parameter memory on your machine.

If you are already up on OS 5.6.2 and/or the A4.1 intrinsic library or if you have a pre-release of WorkShopA4 and you want to update, you just need to:

1. Make sure the WorkShopA4 release disk you use is compatible with the version of the A4 library that you have. The WorkShop release disks and the release profile will have a note on the outside saying 'This WorkShop release is compatible with A4 library release A4.x'. X for the first WorkShopA4 release will be A4.1. On the A4 library release profile there will also be a note saying 'This A4 Library release is compatible with WorkShopA4.x'.
2. Boot the WorkShopA4 release profile from PARAPORT or from the WorkShopA4.a twiggy in UPPER. Make sure your profile is in SLOT2CHAN2. Enter 'S' for System Manager followed by 'F' followed by 'Y'. This will set up the shell so files that begin with '{' will be included in the list of files to be copied. Enter a 'Q' and continue.
3. Enter an 'F' for file manager.

4. Enter an 'M' for Mount followed by SLOT2CHAN2.
5. Enter an 'B' for Backup.
6. Enter '=',-slot2chan2-\$'.
7. If you are doing this from WorkShopA4.a, also mount WorkShopA4.b in LOWER then enter 'B' for Backup followed by '-lower=-,-slot2chan2-\$'. Do the same for WorkShopA4.c
8. Enter 'Q' to quit the File Manager, 'Q' to quit the shell, 'Y' and finally 'P' for power off. Plug your profile into paraPort then push the white button on the Lisa to boot your profile.
8. Enter 'F' then a 'D' for delete followed by 'SYSTEM.CONFIG'.
9. Enter a 'Q' followed by an 'S' for System Manager followed by a 'P' for Preferences. Set up all the preferences for parameter memory on your machine. You will notice the preferences folder now has an extra category called 'WorkShop'. The (t11)buttons file for the WorkShopA4 release adds this extra category.

That is all there is to it! The Backup command will compare all the files on the release profile with those on your OS profile and will copy all the files from the release that you don't have on your profile or that are not the same on your profile. This is why it is very important that you use the Backup command with compatible releases only. Lorraine and Amy will make sure there are always compatible releases between the Applications world and the WorkShop world. If you have any questions, ask someone in the development group for help.

It is assumed that users of WorkShopA4 have read the Nov 22nd 'Guide to the Operating System' and therefore know how to use the OS.

INSTALLATION PROCEDURE FOR NON-COMPATIBLE A4 SYSTEMS

If you are on the standard A4.1 intrinsic.lib, you can replace your current intrinsic.lib with the one in the WorkShop release as described above. Save your intrinsic.lib and run the procedure described in the next paragraph if this does not work.

Later versions of WorkShopA4 will be available from Lorraine and Amy that are compatible with A4.2, A4.3, etc. if these A4 library releases happen.

If you are using an incompatible intrinsic.lib, you need to use the IUManager to install objiolib.obj, sulib.obj and iospaslib in your intrinsic library that is on your OS boot volume. The easiest way to do this is:

1. Boot the WorkShopA4 release profile from ParaPort with your profile in slot2chan2 or slot2chan1.
2. Enter 'S' for System Manager followed by 'F' followed by 'Y'. This will set up the shell so files that begin with '{' will be included in the list of files to be copied. Enter a 'Q' and continue.
3. Type 'F' for File Manager and 'R' to Rename your regular intrinsic.lib to 'my.lib'.
4. Copy EVERYTHING, 'C', that you don't already have on your profile from the WorkShop release to your OS profile. This can be done by doing a copy '=' and replying No when the shell asks you if you want to copy over files that already exist. Make sure you ^{do} Copy ~~intrinsic.lib~~, sulib.obj, objiolib.obj and iospaslib.obj!

5. Delete the file SYSTEM.CONFIG on your profile.
6. Run the IManager on 'my.lib' and change the File '*objlib.obj' to 'objlib.obj'. Rename unit OSINTER to STDUNIT. Rename the segment OSDSLib to SULib. Make sure it is SULib, 'SUL' in upper case and 'ib' in lower case. Rename the file OSDSLIB.OBJ to SULIB.OBJ.
7. Install 'objlib.obj', 'sulib.obj' and 'iospaslib.obj'. 'my.lib' should now be compatible with the intrinsic libraries that WorkShop uses. Quit the Imanager.
7. Rename 'my.lib' to 'intrinsic.lib'.
8. Quit the File Manager, Quit the WorkShop and answer Yes to the first question about being 'sure you want to leave the shell' and then 'P' for Power off. When the power shuts off, hook your profile to ParaPort and reboot. Run the IManager and the Linker plus your own utilities. If they all work, then all is well. If you have problems, talk to someone in the development group.

SUMMARY OF FEATURES ADDED TO LDSA3 SINCE THE LDSA2 RELEASE

(This section is duplicated from the LDSA3 release memo so (more or less) complete documentation of WorkShop features can be obtained by reading the LDSA2 release memo and this release memo. The final complete documentation will be in the WorkShop Product Manuals soon to be released by pubs.)

Features involving significant improvements to the LDS.

- *** 1. The LDSA3 Compiler, Code Generator and Linker allow you to optionally tell them which intrinsic library file to use in the build you are doing. LDSA3 can build software for any intrinsic world no matter how the intrinsic library may be juggled around. The default intrinsic library file is '-OSBOOTVOL-INTRINSIC.LIB'. To specify a different intrinsic library in the Compiler and Generator, enter a '?' when asked for the input file and you will be prompted for the name of the intrinsic library you want to use. The compiler will use this intrinsic library to find interface parts for units that are 'USED' and all other information it gets from an intrinsic library. In the Linker one must enter a +w (new world), when asked for the input file, to get the prompt for a different intrinsic library.
- *** 2. The Editor has a set of menus that are more standard with the Application world. One can print from the editor also. When printing a program, reserved words can be printed in upper case. One is allowed to print either the current selection or the whole document. The editor will number pages and put in space for footers. Of course on the LDS you can leave the editor, do a bunch of work, then return with all your folders intact just as you left them. The editor also comes up very fast on the LDS after the first invocation.
- 3. New Features in the LDS Manager.
 - *** a. The new Exec File PreProcessor by Fred Forsman turns exec files into a whole new thing. One can pass parameters, have conditional execution of exec files using IF-THEN-ELSE, make exec files prompt the user for input, choose which parts of exec files are Run and more. All of this is done with a syntax that is pleasing to the eye and can be commented too. See Fred's document attached at the

- back for more details.
- b.Exec files that have an error in them or do not complete will cause the system to generate an error telling the user his exec file did not complete successfully.
- * c.A Mount on all devices is done at LDS boot time so the Printer and other OS profiles come up mounted.
- d.The selector shell shut down conventions are supported.
- ** e.The LDS Manager will tell the user why any of it's son processes died of unnatural causes. A natural death for a program is dropping out the bottom. Gee, if people were like programs, they could live a happy life forever by programming an infinite loop around a fun part of their life.
- f.The InfiniteServer command is for starting background network processes. These processes are expected to do their thing without speaking (no writelns).

3.New Features in the File Manager.

- a.The Eject command has been removed from Wizard. When UPPER or LOWER are unmounted, they are automatically ejected.
- ** b.Selection of filenames is done in alphabetical order now.
- *** c.When Selecting with Yes or No, you can correct any mistakes you make along the way. It has always irritated me when I make a mistake after selecting 20 files and have to start all over again, as you do in the Monitor Filer. This problem has been solved on the LDS.
- d.Rename now works with wildcards.
- * e.The wildcard capability has been improved on all commands so name changes can be done between input and output as can be done in the Monitor. With the matching wildcard files of
 Foo.Text
 Farg.Text
 to the input 'F=XT,0=M' or 'F?XT,0=M' the output files will be
 Ooo.TeM
 Oarg.TeM
 and to the input 'F=,0\$M' or 'F?,0\$M' the output files will be
 OFoo.textM
 OFarg.textM
- ** f.The OS protection scheme is now supported by LDS. Protected Masters will be deflowered and their copies will only work on the machine they were deflowered on. You are warned and given a chance to escape before deflowering a master.
- g.The FileAttributes command allows you to make a protected master and to set the safety switch on a file so it cannot be deleted.
- h.The following improvements were made to directory listings.
 - 1.Alphabetical
 - 2.These file attributes are listed:
 - C = file_closed_by_OS
 - L = safety_on
 - O = file_left_open
 - P = protected
 - S = file_scavenged
- ** 3.The total number of blocks listed and the total number of blocks used for OS overhead are shown at the bottom of any directory listing. To find out if the OS has lost track of any blocks on your volume, list all the files on your volume. Make sure you

- include the files that start with '{' by using the FilesPrivate command first. The 'total blocks listed' + 'total OS overhead' + 'freecount' should be equal to the size of your volume as displayed at the end of the listing. If this is not true, show your volume to Chris Mcfall.
- * 4.Directory heading listed on every Page.
- * 5.Directory listing of a single file is instant.
- * i.The Online Command has been reimplemented to give much more information. It is displayed on the correct screen now too! The volume attributes are 'M' for Mounted and 'W' for Working Directory.
- *** j.The prefix command really works now. Due to Yu-Ying's Paslib improvements and a few calls in OSInter, all son processes of the shell will be started with a working directory equal to the 1st Prefix set up by the prefix command. When the prefix is changed mid stream, even the resident processes will become aware of the change. This allows one to do software development with up to 3 profiles or 2 profiles and a Corvus on line and be able to redirect file access by just changing the Prefix! Make sure the prefix is set to the Boot volume before using the IconFiler command in Wizard.

5.New Features in the System Manager.

- *** a.The Preferences Folder is now used to set up the system configuration and parameter memory.
- *** b.The OutputRedirect command allows you to direct a record of both your console input and output to a file or to the printer. Console input and output are still shown on the Console too. When you enter the command for a second time and redirect the output to console, any previous output file will be closed. This will be very useful for NPR or for someone who wants to keep track of the output from an exec file, etc. Exec file errors will kill the exec file and also redirect the output to console only. This has all been made possible through a paslib call.
- *** c.The FilesPrivate command allows you to select (list, copy, delete, etc.) files that begin with '{'. The default is that these files are not accessed since they are private files that are to be used by the Applications only. If you want to always access these files, use the FilesPrivate command to change the default. If you only access them from time to time, a specific request for them will access them. For example:
 List '{=' will list all the files beginning with '{' nomatter how FilesPrivate is set.
 List of '= will not list files beginning with '{' unless you use the FilesPrivate command to include them.
 Using the FilesPrivate command changes the default until you reboot or use FilesPrivate again.

More Minor Changes

LDS Manager

- a.The Generate command has returned for 1st ship.
- b.Many bug fixes and silent improvements. The sources of the LDS Shell

were completely reorganized and improved. Conditional compilation was added to remove Monitor Support in A4. This will shrink the size of the shell.

- c. The screen is flipped after a return from the IconFiler or when the console is changed using the Console command.

File Manager

- a. Archivist changed to Archive.
- b. The Backup command does what the old Archivist command used to do. The Archive command is reserved for starting Jim Merritts 'Archivist' utility which is currently not available.
- c. Listing Monitor directorys to a file works.
- d. File Labels are now copied along with the File.

o The End o