READ THIS FIRST – SOFTWARE

، Notes for Sun UNIX™ Release 3.2

October 8, 1986

Introduction

Release 3.2 incorporates bug fixes, System V compatibility, support for ESDI disk drives, and support for the new Sun-3/110, 260, and 280 workstations. See the *Release 3.2 Manual* for details.

Getting help

Should you have any problems while installing or using your system, call Sun Technical Support at 800-USA-4SUN (800-872-4786). From Canada, call 800-225-2615. Have your system's model and serial numbers ready to give the dispatcher. Questions also can be sent by electronic mail to *sun!hotline*. Your mail should include your name, company, phone number, system model number and serial number, a description of your problem, and software release number. This service is provided at no additional charge for systems under warranty or covered by a support agreement. If you have questions about Sun's support services or your shipment, call your sales representative.

Notes for Release 3.2:

Errors in /usr/etc/termcap.

> The entry for wyse-50 has a colon instead of a vertical bar.

> The entry for wyse-925 on the 68010 tape also has erroneous colons.

Source to SunView examples now available.

> The source for most of the programs in the *Example Programs* appendix to the release 3.2 *SunView Programmer's Guide* (800-1345) is available in /usr/src/sun/suntool/examples. The source to seln_demo, a sophisticated selection monitor from the *SunView System Programmer's Guide* (800-1342), is also included. This directory is installed along with source for some of the SunView programs and demos if you select *SunView and Demo Program source* from setup's Optional Software form. (If you are upgrading to 3.2, answer y to install Suntools_source.) Some of the examples are slightly improved from the versions in the manual.

Subwindow layout policy changed.

> In release 3.0, when a frame was made smaller, either by the user's stretching the frame down or from a call to window_set(), there was a bug that sometimes caused the frame border not to be drawn.

> In release 3.2, the window layout management software now tries to preserve the frame border by resizing subwindows when the frame's size is changed: when a frame is made smaller, subwindows that cross the frame border are resized to fit within the frame; when a frame is made larger, subwindows that are smaller than their requested size are resized (up to their requested size) to meet the frame border. This bug fix restores the behavior of release 2.0 SunWindows.

Lockscreen bug.

The −e option to the SunView lockscreen program is broken. This option is meant to make available the ability to exit the SunView environment from which lockscreen is running without returning to SunView. Instead, when the [Exit Desktop] button is invoked, the tools are destroyed but the suntools program is not exited. Also, when running multiple instances of suntools on different screens, invoking [Exit Desktop] crashes the kernel.

Locking NFS files.

There is a bug which may cause reads on NFS files locked with lockf or fcntl to crash the server. The problem occurs only if the NFS client reads starting at an offset in the file which is not a multiple of 4, and the data bytes cross a block boundary on the server's filesystem.

There is another bug which may cause reads on locked NFS files to read past end−of−file. To correct this, patch your kernel as follows:

Sun−2:

```
% adb -w /vmunix
rwvp+14e?w e4              # previous contents 0x1ca
$q
% adb -w /usr/sys/OBJ/nfs_vnodeops.o
rwvp+14e?w e4              # previous contents 0x1ca
$q
```

Sun−3:

```
% adb -w /vmunix
rwvp+144?w e4              # previous contents 0x1ce
$q
% adb -w /usr/sys/OBJ/nfs_vnodeops.o
rwvp+144?w e4              # previous contents 0x1ce
$q
```

New Sun−3/2x0 fonts.

New fonts more suited to the Sun−3/2x0 high−resolution monitor have been added to the font library; they can be substituted for the [smaller] default font in SunView. See page 81 of the *Release 3.2 Manual* for details.

Disk errors on Sun−3/2x0 workstations.

Disk errors of the form

xy<*disk partition*>: read|write retry (*message*) − blk #*number*, abs blk #*number*

may occur occasionally. In general these are non−fatal; *message* is usually one of the following:

```
disk sequencer error
cylinder & head header error
memory addr error
header not found
double hard error
```

For example:

```
xy0g: read retry (memory addr error) - blk #193038, abs blk #242618
```

Spurious interrupts.

Some Sun−3/2x0 systems may generate spurious level 2 or level 3 interrupts. These may be ignored.

New configuration file.

A new kernel configuration file, XYMT260, has been added to /usr/sys/conf.

Bug in tbl.

Tables with columns specified as "n" (numeric field) don't format correctly.

`catman` error messages.

catman may produce error messages of the nature of "no such file or directory." These messages may be ignored. See *catman*(8) for an explanation of the messages.

Sun-2 abort sequence bug.

If the boot sequence is aborted at a certain point on a Sun-2/100 or 120, an attempt to boot from tape may result in the output of a long series of capital *Y*'s until the machine is again aborted. The workaround is to enter "k1" at the boot PROM prompt (>).

This bug seems to result from the keyboard UART being left in an improper state and therefore will not be seen on machines using terminals rather than Sun monitors/keyboards.

Installing tapeless Sun-3's.

On page 123 of the *Installing UNIX* manual (800-1521-05), the command given for copying mini-UNIX should be

    From: *e_interface*(0,*host_number*,1)minifs

if you're installing a Sun-3 and your remote host has been installed as a file server. The "1" in this case refers to public partition 1. A "1" is not needed when booting (e.g. stand/copy on page 122) because of the link under /tftpboot.

VME-to-VME adapters in a Sun-3/110.

When a VME-to-VME adapter (Sun Option 160A) is used to install non-Sun hardware into a Sun-3/110, the adapter must have a part number of 501-1191-01 or higher. If the adapter is Sun part number 501-1059-01 or higher (earlier version of Sun Option 160A), you may not be able to boot the system.

The Sun VME SCSI Controller that is mounted in the VME-to-VME adapter must be 501-1138-01 or higher. An earlier version of the Sun VME SCSI Controller (part number 501-1149-01 or higher) used in other Sun products (Sun-2/130/160 and Sun-3/160/180) will cause the system not to boot.

Formatting SMD disks.

The **format** command now reads the defect list and is therefore recommended instead of the **fix** command.

Installing a file server as a remote host.

If you plan to use the file server you are installing as a remote host for remote installation of another workstation, you will need an additional 5 megabytes of free space in /pub. Be sure to use the correct /pub filesystem (68010 or 68020). Knowledgeable users may wish to load mini-UNIX into a filesystem other than /pub.

Installing servers.

Networking tools and programs must be loaded when installing a server, or it will be unable to run the Yellow Pages and diskless clients will be unable to boot.

Booting from SMD disks.

When booting mini-UNIX on a VME-based workstation from a Xylogics disk controller jumpered for 20-bit addressing, the kernel may panic with an "unable to mount root" error when booting for the first time. When booted a second time (without reloading mini-UNIX), it should boot without any problems.

Normally pins JM on the controller are jumpered for 24-bit addressing.

Setup client cards.

There are no client cards in *setup* for Sun models 2/100, 3/110, and 3/2x0. Use the 2/120 card for the 2/100, and one of the 3/160 cards for the 3/110 and 3/2x0 series.

Note that the cards for the color workstations default to a 24-megabyte swap area.

Using vt100 consoles.

Using terminal type "vt100" during *setup* will result in a core dump. Use terminal type "ansi".

Using echo −n in Bourne shell scripts.

If you specify System V behavior (e.g. PATH=/usr/5bin:$PATH), shell scripts which contain lines such as

    echo −n args

will echo "−n args" with a trailing newline. Specify a path without /usr/5bin to get the 4.2BSD behavior.

GP example source.

The *Software Interface Manual for the Sun Graphics Processor* includes example applications for the GP; they are described in Appendix A of that manual. Machine−readable code is included in /usr/src/sun/demo/GP1/VIEWPORT. There are two errors in the source files for this package:

In box.c, the routine init_gp should use the gp1_d function instead of ioctl's to get the minor device number and the static block.

Change

```
GP_fd = gp1_d(pw->pw_pixrect)->ioctl_fd;
if ((ioctl(GP_fd, GP1IO_GET_STATIC_BLOCK, &GP_statblk) < 0) ||
        (ioctl(GP_fd, GP1IO_GET_TRUMINORDEV, &GP_mindev) < 0))
        {
                perror("");
                exit(0);
        }
```

to

```
GP_fd = gp1_d(pw->pw_clipdata->pwcd_prmulti)->ioctl_fd;
GP_mindev = gp1_d(pw->pw_clipdata->pwcd_prmulti)->minordev;
if ((GP_statblk = gp1_get_static_block(GP_fd)) < 0)
        {
                fprintf(stderr,"Cannot get static block\n");
                exit(0);
        }
```

In gpbuf.c, the gpb pointer is accessed before it has been initialized.

Move the lines

```
gpb->gpb_gfd = gp1_d(pw->pw_clipdata->pwcd_prmulti)->ioctl_fd;
gpb->gpb_mindev = gp1_d(pw->pw_clipdata->pwcd_prmulti)->minordev;
if ((gpb->gpb_sbindex = gp1_get_static_block(gpb->gpb_gfd)) < 0)
        error("Create_VP: cannot acquire GP static block\n", 0, 0);
```

so they appear *after* the statement

```
gpb = ObjAddr(gpbobj, GPDATA);
```

pr_close no longer in pixrect library.

pr_close is now a *#define* macro. Programs using the pixrect library which were compiled under pre−3.2 releases will run under 3.2 without change, but cannot be relinked under 3.2 without recompiling.

New pixrect typedefs.

Two new typedefs in pixrect.h and pixfont.h may cause collisions with users' typedefs. See page 79 of the *Release 3.2 Manual*.

SunCGI change.

The BEST_FIT endstyle does not always draw the first and last pixels of a single vector polyline.

Partial optimization.

Page 4 of the *Floating−Point Programmer's Guide* (800−1552−01) refers to partial optimization as "−p". It should say "−P", as a lower−case *p* is used to specify profiling.

FPA needs /dev/fpa.

If you have an FPA (floating point accelerator), run "/dev/MAKEDEV fpa" after installation completes; then reboot to download microcode and initialize the FPA.

/usr/sys/conf/SDST160.

If you use *lusr/sys/conf/SDST160* and you have an FPA, add

    device   fpa0 at virtual ? csr 0xe0000000

to your configuration file. This line can be found in *lusr/sys/conf/GENERIC*.

CPU board level.

The FPA is intended to be used with CPU's with part numbers of 501-1163 or 501-1164. *mc68881version*(8) may be used to test the CPU board level. If the 68881 is described as "A79J", the CPU board was not properly updated prior to the installation of the FPA.

Sysdiag and the EEPROM.

If you use *sysdiag* to test the FPA and the 68881, it may be necessary to alter the EEPROM to insure that the 68881 is configured in the EEPROM. See *Installing Unix on the Sun Workstation* for details on EEPROM programming.

Games.

The following games and associated files are no longer supplied in the release:

                battlestar
                ching
                craps
                moo
                monop
                quiz
                rain
                robots
                sail
                sail.log
                snake
                snscore
                trek
                worm
                worms

                lib/battlestar.log
                lib/ching.d
                lib/quiz.k
                lib/robots_roll
                lib/saildriver
                lib/saillog
                lib/snakerawscores