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Software Technical Bulletin
February 1987

Software Information Services

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2 February 1987

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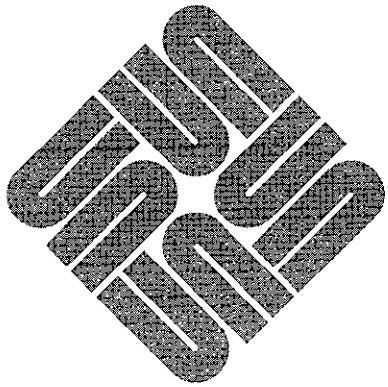

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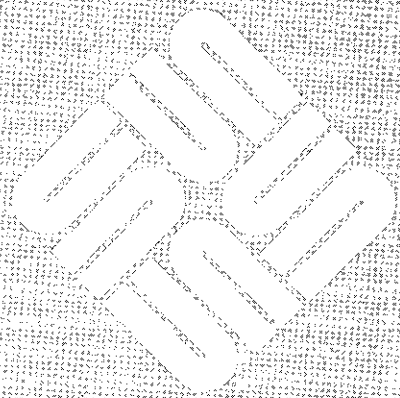

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INTRODUCTION

I am happy to take this opportunity to help introduce Sun's new Software Technical Bulletin. One of the major goals of the Customer Service Division is to make sure that you, our customer, are provided with the highest levels of service with all of our service products.

Part of that commitment is the communication of software technical information and news. The Software Technical Bulletin will present short articles on subjects of technical interest, and it will be solutions oriented. It also allows us to go into more depth on aspects of Sun's software products - much more than than is available in Sun's standard documentation or in our marketing literature.

This bulletin is produced by our new Software Information Services group. This new group is just one example of how the Customer Service Division continues to invest in an expanded range of services to provide more effective service and support to our worldwide customer base. Your feedback on this bulletin is welcome, and I hope you will take the time to tell us how we can make the Software Technical Bulletin better meet your needs.

Bob Lux
Vice-President and General Manager, Customer Service Division

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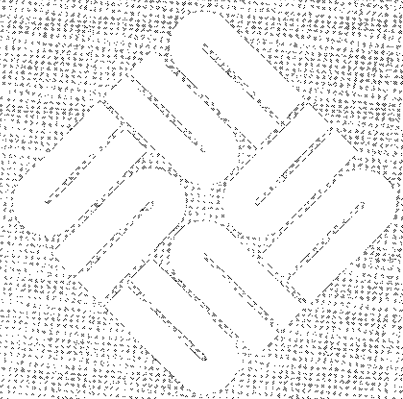

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ARTICLES

System Administration

2.1. Making sure */dev* is correct with GP and FPA boards

Field engineers report that several customer sites who have machines with GP (Graphics Processor) and/or FPA (Floating Point Accelerator) boards do not have the required */dev* files.

You can make sure this hardware is enabled by ensuring that the */dev/gpone** and */dev/cgtwo** files exist (for the GP and the Sun color frame buffer, respectively).

You can tell if a machine's GP has been enabled in a number of ways. First, during boot-up, there will be messages indicating that microcode is being loaded into the GP and that *gpone0* and *cgtwo* have been bound together as */dev/fb*.

Second, and perhaps quicker, check for the existence of the files */dev/cgtwo0*, and */dev/gpone0a* - */dev/gpone0d*.

Third, watch how the root grey pattern is painted when a window is removed or when suntools first comes up. If it paints from top to bottom, the GP is not being used. If it paints from left to right, the GP is being used.

If you discover that a machine is not configured correctly, do the following:

cd to /dev (logged in as **root**)

For the GP, execute the following commands outside of the window system:

```
# makedev cgtwo
# makedev gpone

# /usr/etc/gpconfig gpone0 -f -b cgtwo0  (or re-boot)
```

For the FPA, execute the command:

```
# makedev fpa
```

reboot the system.

2.2. IFREE Panics

A low level of incidents of failures have occurred on systems having a Xylogics 450 controller with 2 Fujitsu Eagle Disc drives attached. The system may crash and display the following error message:

```
dev = 0x500, ino = 60, fs = /
panic: ifree: freeing free inode
syncing disks... 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 done
```

Attempts to duplicate this problem at Sun are underway, but have not been successful yet. Until the solution is found, the workaround below should be followed.

Background

Several customers are experiencing random diskless client crashes on networks where a server is configured with a single Xylogics 450 controller and 2 Fujitsu Eagle disc drives. It appears that this problem is more pronounced as the number of diskless clients reaches 7 or more per server. At random any client may crash with a `panic: ifree freeing free inode` after which the disc syncs and the client will attempt to reboot.

Workaround

The workaround to this problem is to connect only 1 Eagle disk drive to the controller. If you have further questions please contact either your field service engineer or call the AnswerLine (800 USA-4-SUN).

Data Communications/Networking

2.3. SUNLINK HASP, and routing schemes

This article will discuss HASP (Houston Automatic Spooling Program) and routing schemes. If you are using Sun workstations and Sunlink to talk to an IBM host mainframe this will give you some ideas on the set up.

In this article, 'HASP' and 'HASP workstation' refer to an RJE workstation that communicates with a remote host mainframe running HASP software and HASP Multileaving refers to the protocol.

Background

First some background. The first Remote Job Entry (RJE) systems used specialized hardware designed specifically for that task. Among these early RJE systems are the IBM 2780 and 3780 workstations, hard-wired machines designed exclusively for RJE applications. The user submitted jobs in the form of cards, receiving output on the card reader/punch device or as printed text on a printer. The introduction of HASP provided better functionality, along with improved performance and flexibility through the use of pseudo- devices. A pseudo-device is a software facility that emulates a set of functions normally performed by a hardware device. By utilizing multiple pseudo-devices, a single workstation is given the ability to send or receive multiple data streams simultaneously. Since the data streams to and from the workstation no longer have to be queued one after the other, the overall efficiency of the workstation is increased. Now let us look at some of the other consequences of this multileaving technique.

Multileaving

Although HASP Multileaving utilizes a limited subset of the bisync protocol definition to control the data link, there is no control state for the data link other than at the time of link establishment. There are no read/write states of the data link after the link has been established. Once the initial contact has been made, the link is capable of data in response to a data communications session. The station receiving data can respond with ACK0 or with a data frame. It is also possible for the data response to be a 'null message', which is a data frame with no data. Unlike normal bisync, data in response to data, is always valid. Paradoxically, HASP Multileaving was seemingly able to accomplish more and at the same time, to be less taxing on the data link. However, a price was paid in terms of symmetry. HASP Multileaving can only be used in a workstation-to-

host application and not in a workstation-to-workstation application.

Example

For example, in the following multileaving sequence, the exchange shows traffic between the HASP workstation and an IBM host in the manner described above.

Message direction:
<— HASP workstation response.
—> Host response.

Data Link Messages	Explanation
.	.
.	.
.	.
2 sec timeout	workstation timeout.
<— ack0	Hasp acknowledges.
—> ack0	host responds.
<— Req to send: chan 1	Hasp requests on chan 1.
2 sec timeout	
<— ack0	Hasp acknowledges.
—> Permission granted, chan 1	send on channel 1.
<— Block 1, chan 1	Hasp sends data on chan 1.
—> Req to send: chan 2	host acks with null msg, and request open of chan 2.
<— Block 2, chan 1, FCS chan1 off	continue xfer data on chan 1, throttle chan 1 off temporarily.
—> ack0	host responds.
<— EOJ chan 1, FCS chan1 on	signify end of data on chan 1, turn on chan 1 future data xfers.
—> Block 2, chan 1	continue data xfer on chan 1.
<— ack0	Hasp acknowledges.
—> EOJ chan 1	signify end of data on chan 1.
<— ack0	Hasp acknowledges.
—> ack0	host responds.
.	.
.	.
.	.

If the application calls for file transfer between a SUN and an IBM host, the HASP option is decidedly the better choice. Since most non-Sun non-IBM hosts can only connect to a 2780 or a 3780 RJE workstation, Sunlink BSCRJE offerings include all three of these connection options. Whenever you have the choice, however, use HASP instead of the 2780 or 3780 options.

SUNLINK HASP ROUTING

The host remote output routing responsibility ends at the remote HASP workstation or Sunlink gateway server that receives and submits RJE jobs on behalf of users located at various nodes within the local network. Since the job output (or "sysout" in IBM terminology) terminates at the gateway, the Sunlink BSCRJE default places the sysout in a common, group-access file at the gateway. Searching and manually extracting RJE sysout from the file over the network is not an acceptable alternative for most users. For this reason, Sunlink also offers a very flexible dynamic routing option (-dy) that works well as long as the job's JCL (Job Control Language) and any of its associated sysout is not sent separately by the host.

Normally, a job output consists of:

Separator Page
Job Log
HASP Statistics
JCL Stream
Messages
One or more sysout output files
End Separator Page

If the -dy is set when Sunlink HASP is invoked, the first 1,000 bytes[1], starting with the separator page, is scanned for the "#PATH=" string in order to establish pathname directory/filename and hence the final destination of the job output on the Sun/UNIX side. Note that the earliest possible place where the string can be included in the job output is the JCL job stream. This is not difficult if the separator page, job log, and HASP statistical information is less than 1k bytes. One suggestion in making sure that it is less than 1k bytes, is to use the NOSEP parameter when defining the remote workstation at the host side.

For example, to prevent transmission of separator pages on printer 1, the attributes for remote 28 is as follows:

```
R28PR1 PRWIDTH=132,NOSEP
```

Alternately, the same results can be achieved by issuing the following reset command from TSO or a workstation with the proper authorization:

```
$T R28PR1,S=N
```

Although the -dy option is an improvement in the right direction, it addresses only a very specific type of job output dealing with a single server and a single host connection. However, it may be the basis on which to develop a general routing procedure that can accommodate single jobs with multiple, independent,

[1] This figure can be increased from 1,000 to 10,000 bytes via an option in the later versions of the software. It is also possible to write your own dispatcher/scanning routines if desired. The interface to do so is explained in the 'SunLink BSCRJE' manual, part number 800-1390.

sysouts.

For example:

In the following scenario, assume the sysout of job 1 is not routed since Sunlink HASP scanned the first 1k bytes and was unable to find the #path= string. Then, if more than one Sunlink HASP gateway is being used and the sysout destined for one gateway is instead redirected to the other gateway, the -dy option is insufficient.

This is not far fetched because JES2/3 (Job Entry Subsystem) tends to treat each sysout as a separate entity with its own set of separator pages, and because remote sysout redirection is possible in a number of ways. For example:

a) Invoking of the JES command $R.

b) Via the dest parameter in the sysout dd statement;
ie, //DD1 DD SYSOUT=A,DEST=RMT28

c) By having punch output sent separately from the print output; ie, /*ROUTE PUNCH RMT201

d) Redirecting the print output to a different remote while the job listing of the JCL is still being sent to the default remote; ie, /*ROUTE PRINT RMT35

e) Used with sysout dd as in b).
ie, //OUT1 OUTPUT DEST=RM28

Using these assumptions, the output from two jobs destined for the same remote HASP workstation could, under certain circumstances, appear in the following order:

Separator Page (job 1)
Job Log (job 1)
JES Statistics (job 1)
JCL Stream (job 1)
Messages (job 1)
End Separator Page (job 1)

Separator Page (job 2)
Job Log (job 2)
JES Statistics (job 2)
JCL Stream (job 2)
Messages (job 2)
End Separator Page (job 2)

Separator Page (job 1)
Sysout Output (job 1)
End Separator Page (job 1)

A possible solution to the problem is to note that most host sites include an image of the job card on the separator pages for accounting and tracking purposes. Since the job card may contain an optional "USR=(userid, rlogin)" field, an extension of the -dy option could correlate this information with a file containing the "#PATH=" routing instructions. Host sites that do not currently incorporate the job card with the separator page could receive the user domain code from such sources as SHARE, an IBM host user organization.

Since the search order is always the separator page, job card, followed by the //*comment card, host sites that choose not to implement the host code changes can still fall back on the original -dy option. The additional enhancement would be transparent to those group of users.

It is important to note that with the advent of JES, HASP has been delegated to obsolescence and, for all practical purposes, HASP is rarely found at host sites. The above mentioned enhancement could work with JES, and can therefore be very useful for a large number of applications. If you would like to see this kind of enhancement in a future release of Sunlink, please contact Gene Hugh at Sun, in Mtn View.[2]

[2] See Page 3 for mail and e-mail information

NFS Soft Mounts

2.4. NFS Soft Mounts and the *fsync()* Function

An NFS Soft Mount is a mount that gives up on a particular NFS request after a timeout, rather than retrying the request forever until it succeeds. The mount can be specified as *soft* as an option in the */etc/fstab* file or when using the */etc/mount* command.

One thing to be aware of when deciding whether to use soft mounts or not is that a write to a soft mounted NFS file may fail without an error being reported back to the program that did the write, for example, a copy (*cp*) command. This is a side effect of the filesystem doing read-ahead and write-behind. Remember that *write()* returns to the user once the data is transferred into the kernel (if you are writing to a file system and not a character device). The write may not be synchronous with the actual data transfer to the physical device. Consequently, there may be no system call left to report the error to when the kernel figures out that the actual physical write has failed.

This is not a new phenomenon, it is simply an offshoot of using buffers.

You may decide to use a hard mount

One way to greatly lower the chance of a timeout happening is to use a *hard* rather than a *soft* mount. If these timeouts are a major concern, the decision might be made to use this other option.

No matter which option is chosen, at the programming level, one way to ensure that all data is really on the physical disk, is to do an *fsync()* on the file descriptor before closing it. The current implementation of this call is expensive for large files.[3] However, if there are no error returns on the *fsync()*, then you can be sure all the data has been written to the disk.

[3] See *fsync(2)* man page, *Unix Interface Reference Manual* (800-1303-02)

Appending to 1/4-inch tapes

2.5. Multiple files vs. appending to one file on 1/4-inch tapes

This article will discuss tape appends. There are differences in how things are done depending on whether you are using a 1/2" tape or a 1/4" tape. There are also differences depending on which 1/4" tape controller is being used. By understanding these, you will be able to decide whether the append operation you want to do will succeed.

1/4-inch ≠ 1/2-inch

The most important difference between a 1/2-inch and 1/4-inch tape is that you cannot overwrite a 1/4-inch tape unless you start at the beginning of the tape. Another difference is that when using 1/2-inch tape, two EOF (end of file) marks are written at the end of the tape. This is not true with 1/4-inch tape. A single EOF is written at the end of each tape file. The tape controller itself will always make sure there is blank tape after the EOF is written. When reading, the blank tape is detected, and the tape controller will give a second EOF indication. This makes it behave similarly to a 1/2-inch tape.

Implications

Consequently, there are a number of things you cannot do with 1/4-inch tape.

1. If there are three files on the tape, you should not expect to be able to change just the second one.[4] Nor can you change selected tape 'records' (tape blocks) within a file.

2. If a tar file exists, you cannot `tar -r` that file. That is, you cannot add more files on to the existing *tar* file, even if it is the last file on the tape.

You can create *multiple* files on a 1/4-inch tape, but in order to append you must be at the end of all the data.

MT02 SCSI Tape Controller Bug

There is a problem with the MT02 SCSI tape controller that prevents appending from working in cases where it should. The workaround is to do an `mt fsf 999999` to make sure you get to the end of the tape. In Releases 3.0 through 3.2, this will produce an error message on the console.

As long as you follow the above guidelines, appending will work on 1/4-inch tapes.

---

[4] *Editor's Note:* Although this may seem to work in some cases, the fact is that depending on this operation to work each and every time cannot be guaranteed, especially as the files get bigger. It is much more likely to fail than to succeed. Also note that this particular example should not be expected to work on 1/2-inch tapes. That is, you cannot overwrite the second file on a 1/2-inch tape either.

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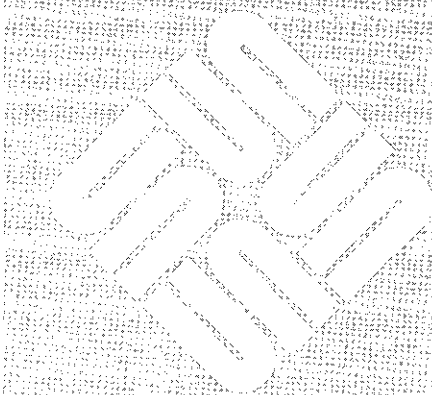


3

IN DEPTH

Sunview 2.0

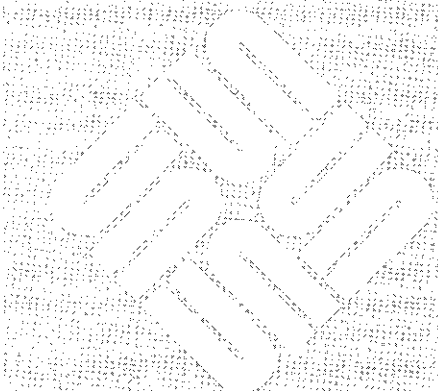
3.1. SunView 2.0 Directions

The following discusses Sun's plans for SunView 2.0. It is presented so that you can plan now for future changes in SunView. It can be extracted and used as a separate document.

SunView 2.0 Directions Statement

6 October 1986

Sun Microsystems, Inc.
2550 Garcia Avenue
Mountain View, CA 94043



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1

Introduction

Purpose of this document

This document gives a general overview of Sun's plans to implement the SunView user interface toolkit on a new architectural base. SunView's graphical window-based environment has become familiar to both end-users and application developers over the past year. Sun has a strong commitment towards maintaining SunView as a stable basis for continuing development over the next several years. This commitment is reflected in the decision to move the SunView environment from its current SunWindows base to the newly announced NeWS platform.

In releasing this document, which contains descriptions of planned and likely changes in the SunView definition, we hope both to show the motivation for some of our technical decisions and provide early direction for application developers currently developing on SunView.

NeWS: A new platform for SunView

Sun has recently announced NeWS, a portable window system platform based upon a subset of the PostScript page description language. Sun plans to adopt NeWS as its future window system architecture in place of the current SunWindows architecture, and is also proposing to make NeWS an industry standard window system platform in the workstation and PC marketplaces. In the tradition of the Network File System, Sun will publish the NeWS specifications and license the product to other hardware and software vendors.

NeWS' ability to support many diverse user interfaces and window-based environments gives it strength as a potential standard. NeWS will bring network integration of window-based applications, a high-level imaging model, and a design optimized for interactive performance to the Sun application developer.[1] However, NeWS is very much at an architectural level. It does not implement a user interface, a window management paradigm, or a user interface toolkit for the development of graphical application interfaces; rather, it provides a platform for their development.

SunView 2.0

This higher level of functionality will be supplied by SunView 2.0, a new version of the current SunView[2] product designed for the NeWS platform.

[1] More information about NeWS can be obtained from the NeWS overview, or the upcoming NeWS technical report.

[2] In this document, "SunView" refers to the current SunView product as included with releases 3.X of the SunOS.

When?

SunView 2.0 atop the NeWS platform will start shipping as a bundled product on Sun workstations in the fall of 1987. SunView 2.0 will be the basis for future window system enhancements. SunView on the SunWindows architecture will continue to ship on Sun workstations in addition to SunView 2.0 for the foreseeable future, in order to allow our customers to make a graceful transition from the old to the new. In addition, SunView/SunWindows binaries will run on a Sun NeWS server with some restrictions.

Changes

Moving to NeWS from SunWindows involves changing from a kernel-based to a server-based architecture, from a machine-specific to a portable platform, and from a device-specific, pixel-oriented imaging model to one based on arbitrary coordinates and transformations. These changes inevitably have effects on the SunView specification. This document and succeeding versions are intended to give the application developer early indication of the changes which will occur; they will become a proper *Converting from SunView to SunView 2.0* manual by the time of the SunView 2.0 release. On-line aids and additional bundled documentation will be available to ease the transition before SunView 2.0 is released.

Audience

These and future SunView direction documents will be targeted towards the experienced SunView application developer: programmers who are already familiar with SunView and/or its underlying platform, SunWindows. The novice SunView developer should first read the *SunView Programmer's Guide* before attempting to understand the changes described.

SunView on NeWS

NeWS is a *server*-based window system, in which the display manager, or window server, is a single user-level process on the machine with the physical display; applications ask the server to draw on the screen and notify them of user input events.

SunView 2.0 applications will inherit many of the benefits of NeWS discussed above. They will be able to run on one machine and display their output in windows on another machine; they will be able to run on different NeWS servers using a variety of display hardware,

A Better Product

SunView itself was an evolution of the SunWindows programming facilities into a comprehensive user interface toolkit using the attribute-value interface, opaque high-level objects, and the Notifier and Selection Service to tie the various packages and routines together.[3] Faced with the inevitable changes that need to be made to SunView as a result of moving to a server-based technology, and given the opportunity to take advantage of some of the features of NeWS, we have improved SunView 2.0 in numerous ways:

[3] *The SunView Model* in the *SunView Programmer's Guide* describes the concepts behind SunView. As you shall see, many of those concepts and goals remain unchanged in SunView 2.0.

- Packages are more consistent in their use of attributes.
- You use the same object handle for all operations involving a window.
- You use the attribute-value interface everywhere.
- You can interpose on the evaluation of attributes, thereby modifying the behavior of the system.
- The system model is much cleaner, which simplifies learning and documentation.
- You can deal with high-level actions at the level of "begin selection" or low-level events such as "user pressed left mouse button down."
- You can arbitrarily map function keys and mouse buttons to high-level actions; this mapping can also be done by the user.
- New features and applications are possible; Sun will be supplying both with the release of SunView 2.0.
- You have access to the PostScript imaging model[4] used by the NeWS server.
- You can program part of the user interface in the server using NeWS' extensible PostScript-based language.

Inevitable Incompatibilities

In making the change from kernel-based to server-based, the programmatic interface to SunView must change. It is not possible to develop a user interface toolkit that will run on all window systems — the variations between window systems are too broad.[5] Certain features of the window system unavoidably percolate up into the packages built on it. For example, in a server-based system, window applications can't access the display themselves, since the display may reside on another machine. Similarly, fonts can't be opened by applications but must be requested from the server.

The *Changes* section of this document discusses the planned changes and likely incompatibilities between SunView and SunView 2.0.

How Much Will Change?

While SunView 2.0 is not completely compatible with SunView, we expect large areas of the programmatic interface will remain unchanged, to the extent that much of the 3.0/3.2 *SunView Programmer's Guide* will stay the same:

- The structure of applications need not change.

  Programs will look the same as before — object creation, installation of notify procs, then `window_main_loop()` to start things running.

[4] You can access sophisticated facilities in the server from SunView 2.0 programs, but this does require you to write PostScript code.

[5] See the *NeWS Technical Report* for a discussion and comparison of different window system technologies.

- The philosophy and structure of SunView does not change.
  The same window types (frames, canvases, text subwindows, panels and tty subwindows) and objects (menus, icons, cursors and scrollbars) will carry over with most of the same attributes.
- A compatibility library will make many changes unnecessary.
  There will be a compatibility package to minimize the mechanical task of changing procedure and object names.

Note that this compatibility does not extend to low-level SunWindows functionality (e.g. SIGWINCH) that predates SunView.

Why SunView 2.0?

The window system technology of the future will clearly be server-based. By developing a version of an existing, full-featured user interface toolkit and applications that runs on the new generation of window servers, Sun gives your applications the ability to run across many machine types on a heterogeneous network of diverse machines. By migrating SunView onto the NeWS platform in particular, your SunView applications gain a migration path onto a state of the art window system.

2

Changes

This section does not discuss all the new features, enhancements, name changes and syntactic alterations in SunView 2.0. It concentrates on substantial issues related to compatibility with existing SunView applications that are not handled by a special compatibility package.

Compatibility Library

SunView 2.0 will have a compatibility library and `#include` files for application developers converting existing programs. These files will be designed to provide a programmatic interface as close to the current SunView interface as possible. The namespace in SunView 2.0 will be simplified so that similar attributes for different packages will share the same name, but the compatibility files will hide name changes from existing programs. For example, the various `*_WIDTH` attributes in different packages will become a single width attribute in SunView 2.0, but the old `MENU_WIDTH`, `SCROLL_WIDTH`, etc. attributes will be supported by the compatibility files.

Attributes and Values

Everything in SunView 2.0 will be built on the model of an attribute-value interface to opaque objects. Even operations such as drawing a line in a window and erasing a character in a text subwindow will be performed by setting attributes of objects, although some of the current SunView function calls will be available through the compatibility files.

New Object Types

The pervasive use of the attribute-value mechanism in SunView 2.0 means that objects which expose their data structures in SunView will be manipulated via attributes of an opaque handle. Where you pass a function a pointer to one of these SunView `structs`, the SunView 2.0 compatibility package will transform the function into a `set()` of the appropriate attributes of the corresponding object. However, in a server-based system like SunView 2.0 the object `struct` itself may reside on another system, so:

⇒ Where your applications examine or modify fields of the `struct`, you will have to alter your code to `set()` or `get()` the corresponding attribute.

This applies to:

- events
- raw pixwin/pixrect access
- fonts

The functionality of these areas has improved anyway — see the sections on *Input Model*, *Imaging Model* and *Fonts* below.

⇒ For these two reasons, in future development on SunView you should place all manipulation of these `structs` in a few routines to ease the transition to SunView 2.0.

Changes to Window Types

Regions

SunView supports a limited notion of window regions. For example, a canvas window with scrollbars is divided into a drawing region and separate regions for the scrollbars. In SunView 2.0, Region objects serve as the basis for all input and output processing and are accessed through a high-level attribute-value interface. The Region object subsumes the functionality of pixwins, pixrects and memory pixrects — see the *Imaging Model* section below. In SunView 2.0, Regions can be nested within other Regions to any depth.

Windows

The Window object in SunView 2.0 is a collections of Regions that has additional attributes such as a title bar, scrollbars, margins, etc.

⇒ In a server-based window system, windows are not devices, so there is no access to windows by their `WIN_FD`s.

A benefit of this is that the UNIX† limitation on the number of file descriptors per process no longer restricts the number of windows in an application.

⇒ SunWindows routines (in the *SunView System Programmer's Guide*) that are passed a window fd will not be supported in SunView 2.0.

Window types such as frames, panels, text and tty are specialized Windows that have additional attributes in SunView 2.0. SunView 2.0 implements an object-oriented notion of inheritance for these objects, which will allow you to develop your own Window types by extending their definitions in PostScript.

⇒ None of this should affect your programs. The compatibility package will convert those package-specific attributes that have become general attributes.

Frames

Frames in SunView 2.0 are similar to frames in SunView, but are more general. The old frame calls and attributes are available through the compatibility library while the functionality of frames and icons has been expanded.

Canvases

You can draw in any Window in SunView 2.0, so the special Canvas window type is no longer necessary. Most canvas functionality is supported by the

† UNIX is a trademark of AT&T Bell Laboratories.

generic Region and Window attributes.

⇒ The compatibility package will support the illusion of a separate canvas type. Note that you usually use a canvas for input and output, which change in SunView 2.0 (see below).

Panels, Text Subwindows, Tty Subwindows

Beyond the renaming dealt with by the compatibility files, no changes that will incur incompatibilities are envisioned except where you manipulate input and events. The tty subwindow in SunView 2.0 will include the functionality of the `cmdtool` style of command subwindow.

Input Model

The SunView 2.0 input model is different from the SunView model. Applications are able to synthesize high-level semantic actions such as "close window," "select all," "scroll to top," etc. SunView 2.0 will allow applications and users to control how low-level key presses and mouse clicks are translated into these high-level semantic actions. Packages are passed the relevant information from the event with the action, but:

⇒ Applications will not have access to the event `struct` itself.

Instead of passing all events to a generic `switch` statement in your program, SunView 2.0 will call individual procedures for the high-level actions your application is interested in receiving.

Imaging Model

SunView 2.0 has an imaging model similar to the current SunView model, although device dependence is reduced and new primitives such as curve drawing are supported. In addition, by writing PostScript, you have access to the PostScript imaging model. In SunView 2.0 drawing routines are passed the opaque handle of a Region object[6]. The Region object replaces pixwins and pixrects; if a Region object is off-screen and retained, this provides much the same functionality as a memory pixrect.

⇒ The pixwin and pixrect `structs` will go away, although the compatibility library will provide many of the existing `pw_*` and `pr_*` output routines.

The `op` value used in drawing

The compatibility files will provide all the existing SunView bit-wise operations between source and destination pixels. However:

⇒ The results of bit-wise combinations of source and destination areas on a color display are not defined.

Color

The color model supported by SunView 2.0 is device independent; its actual implementation is defined by the NeWS Server. A SunView 2.0 client requests a particular color (giving the desired red, green and blue intensities), and the NeWS server returns an opaque Color object that is as close to the requested color as possible. There is no support for colormaps or pixel plane

[6] This is different from a SunView `pw_region` — see the *Regions* section above.

manipulations.

⇒ The lack of access to colormaps is a major change from the SunView color model.

Bitmaps and Rasterfiles

Bitmaps can be loaded from files produced by `iconedit`, just as before, and the current rasterfile formats will still be supported.

Repaint

You can ask the server to make a Window retained, but there is no guarantee that it will have the resources to make the Window retained.

⇒ Applications that use canvases or user-defined Windows to draw on should be prepared to repaint themselves. This has always been recommended in SunView.

Fonts

Font support in SunView 2.0 is more consistent than in SunView, but:

⇒ SunView 2.0 fonts and font routines are incompatible with SunView fonts and font routines. Any SunView code that accesses components of a pixfont `struct` will have to be rewritten.

Most such code is to figure out the size and positioning of characters. SunView 2.0 will include attributes that return the "geometry" of a font, a string, or a span of characters, together with utility routines to calculate where text should be positioned in the window.

⇒ The font format used by SunView 2.0 is different than the `vfont` format of fonts produced by `fontedit`. SunView 2.0 will provide facilities for converting SunView fonts to fonts usable by a NeWS server.

⇒ Also, to permit font scaling, you cannot access the bits of a glyph in a font.

Miscellaneous Objects

Scrollbars

The scrollbar model will change somewhat in SunView 2.0. Simple clients will remain the same, but part of the programmatic interface will change along with a possible change in the scrollbar user interface.

Cursors

We do not foresee any cursor compatibility issues, except that crosshairs may not be supported by the NeWS server.

Menus

Menus will have the same attributes, except input and event handling will be different.

The Selection Service

There will be an attribute-value interface to the Selection Service, with some changes in functionality.

The Notifier

⇒ Usage of the Notifier will be different in SunView 2.0.

You will need to modify any use of the Notifier for window-related interposition on events in SunView. Many actions that you have to interpose on using the Notifier, such as frame closing and window destruction, will have their own procedures in SunView 2.0, as described in the *Input Model* section above. In SunView, interposition is only allowed on event handlers; in SunView 2.0, interposition will be a general feature of the attribute-value interface.

4

CUSTOMER DISTRIBUTED BUGSLIST

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4.1. Customer Distributed BugsList 23

4

CUSTOMER DISTRIBUTED BUGSLIST

Customer Distributed BugsList

4.1. Customer Distributed BugsList

What follows is the first Sun Customer Distributed BugsList. The data is accurate as of 12/31/86.

This list will be published quarterly.

Organization

The Customer Distributed Bugs List is divided into 2 parts: open bugs in SunOS and open bugs in other Sun software products. Within SunOS bugs are divided into 3 sections. Within each section bugs are sorted by release with the latest release first and then by topic. Bugs in other Sun software products are sorted by release with the latest release first and then by topic.

Individual Entries

Each entry in the Customer Distributed Bugs list consists of a one line synopsis of the bug, the release(s) in which the bug occurred, and a description of the bug. The description includes the problem, the configuration where applicable, and examples of the problem where available and succinct.

Some of the bugs were eliminated from the list on the basis of the following criteria:

1. Duplicate bugs were eliminated. The bug is listed with the most recent release.

2. The entry was not considered to be a bug, but an in-house request for enhancement.

3. Bugs that refer to in-house situations only.

4. Due to time considerations, bugs described only by lengthy code with few comments, were eliminated. These will be summarized and included in the next issue of the Customer Distributed Bugs List if they are still open bugs.

Editor's Note: The printing of the first ever Customer Distributed BugsList has been a learning experience for SIS (Software Information Services). We will be improving the format and contents of future lists. Your ideas are most welcome. (Please see page 3 for mailing information).

Customer Distributed Bugs List

(printed 1/16)

SunOS -- Section 1

Topic: Release 3.2--kernel

1. Synopsis: tandem mode (tty(4s)) sometimes fails to send XON
   Release: 3.2fcs, 3.0fcs

   Description:

   The Sun tty port needs to send several XOFFs before the device appears to respond due to the output buffering on the device: the Sun then 'forgets' to send an XON at the appropriate time.

   The problem occurs using a tandem mode on a Sun tty port that is connected to custom hardware.
   This hardware responds to XON/XOFF but only on a per-buffer basis. The output buffer contains 40 to 80 characters.

2. Synopsis: newly-installed system hangs, giving "no space" message
   Release: 3.2fcs

   Description:

   The error is related to 3.2 installation. A stream of the error message "no space" occurs after setup during boot of the system. The hardware configuration is:

   3/160s with 8MB RAM
   380MB drive on Xylogics 450
   1/4" tape.

   The disk is configured as follows:

A - 19.07	E - FREE
B - 16.62	F - 20.21
C - 131.17 (4 clients - root=8MB & swap=24)	G - FREE
D - 138.880	H - 51.21

3. Synopsis: EMT trap errors from large program
   Release: 3.2fcs

   Description:

   Customer has proprietary software that infrequently gets EMT trap errors.

Topic: Release 3.2--compiler

4. Synopsis: C loses track of register variables after function calls
Release: 3.2

Description:

C loses track of register variables after function calls. For example, in a C program register variable "a" is declared and assigned to a register. In another function "b" is declared and incorrectly assigned to the same register, thus losing the value of "a".

Topic: Release 3.2--System Administration

5. Synopsis: tapeless server installs occasionally fail in 3.2
Release: 3.2fcs, 3.2

Description:

During installation, the server crashes with a "dup ialloc" panic after installing the first (3/75) client installing the following configuration:

3/280 server, xylogics 451 controller, fujitsu disk
3 clients: 3/75, 3/140 and 2/50
3/110 tape server

However, when only one client was specified, no problems were seen. This system has been installed as a tapeless server before, running 3.2, with 2 dummy clients.
All clients were halted during the installation.
Customer worked around the problem by telling setup to make only one client partition with a huge swap partition, and then manually creating the remaining client partitions.

Topic: Release 3.0--documentation

6. Synopsis: Xy 451 configuration for AC-power off protection doc wrong
Release: 3.0

Description:

Documentation in the manual, dated 18 March, 1986 (p. 11), incorrectly states that the Xylogics controller should be

configured to allow AC-power down protection.

The incorrect statement is:
Jumper Label JH: 1-2 in for AC Power-down protection

It SHOULD read:
Jumper Label JH: 2-3 in for AC Power-down protection

7. Synopsis: panic ifree, 2 drives on one Xylogics 450/451
Release: 3.0

Description:
Sometimes clients served by machines that have 2 disk drives on a single Xylogics 450 or 451(?) controller experience a "panic ifree" when a block of zeros is returned by the server instead of a block of valid inodes.

Topic: Release 3.0--sunview1.0

8. Synopsis: Control characters in cmdtool
Release: 3.0pilot

Description:
Control characters and "more" do not work in cmdtool.
Workaround: Use shelltool instead of cmdtool for such applications.

SunOS -- Section 2

Topic: Compiler

9. Synopsis: cc: -f68881 and cast of unsigned to double causes compiler error msg
Release: 3.2, 3.2pilot

Description:
A cast of an unsigned int to double when compiled with the -f68881 fp switch generates a compiler error message;

... compiler error: expression causes compiler loop: try simplifying

10. Synopsis: C compiler removes .o files unnecessarily
Release: 3.2

11. Synopsis: "dbx: fatal error: Too many open files"
Release: 3.2

Description:
A dbx which has been running for a long time eventually dies, giving the error message: dbx: fatal error: Too many open files

12. Synopsis: f77 -p produces assembly "Multiply defined symbol" errors
Release: 3.2, 3.2fcs, 3.0fcs

Description:
The following code compiled with "f77 -pt.f" "f77 -pg t.f" gives the error message "Multiply defined symbol" from the assembler.

```
call func(1)
call ent1(1)
call ent2(2)
call ent3(3)
stop
end
function func(arg)
integer arg
integer localvar
localvar = arg
entry ent1(arg)
localvar = arg
entry ent2(arg)
localvar = arg
entry ent3(arg)
localvar = arg
return
end
```

13. Synopsis: Double precision sin does not work correcly in fortran
Release: 3.2

Description:
Double precision sin produces an incorrect value in some instances.

14. Synopsis: fortran scrolling output to right in a do loop
Release: 3.2

Description:
The following program loops through reading and writing to a file. Somehow the print of "counter" gets scrolled to the right by exactly the same number as the do loop index. Compile t.f with "f77 t.f".

```
      integer counter
      integer i
      counter = 0
      do 1 i=0, 5
            write(17,1000) counter
            rewind 17
            read (17,1000) counter
            counter = counter + 1
            rewind 17
    1 continue
      stop
 1000  format(1x,'counter:'/i6)
      end
```

Output file fort.17 looks like this:

```
 cou
 5
```

If the do loop variable is 4 fort.17 looks like this:

```
coun
4
```

15. Synopsis: fortran inquire doesn't work on closed files
Release: 3.2, 3.0

Description:
The Fortran inquire statement. When used on closed files "inquire" gives erroneous answers on record length, access type, and format.

16. Synopsis: Comparing 16 bit complex numbers gets undefined routines in the loader
Release: 3.2, 3.1

Description:
When trying to compare two 16 bit complex numbers, an undefined routine is returned from the loader.

Undefined:
Fz_ne
Fz_eq

17. Synopsis: Gprof doesn't give flat profile
Release: 3.2

Description:
Gprof does not produce the flat profile that it should produce.

Topic: Documentation

18. Synopsis: need documentation describing print filter hook
Release: 3.2, 3.0, 3.0fcs

Description:
The System Administration Manual describes the interface for print filters (see page 167, section 'Output Filters', heading 'Output Filter Specifications' of the 3.0 version of this manual), but omits one important issue required for correct operation. This hook is critical if more than one print filter is used.

19. Synopsis: quotas fail unless quotas file is explicitly created
Release: 3.2

Description:

It should be noted in the user manual that setting up quotas for a file system will not work unless the file named "quotas" first exists at the file system root. This file must be explicitly created; edquota (8) will not make this file for you.

Topic: graphics

20. Synopsis: CGI: await_event() returns a ptr to free'd memory
Release: 3.2

Description:

The CGI function await_event() returns a pointer to memory which has been free'd.
This effectively makes it impossible for await_event() to work with input devices IC_STRING, IC_STROKE, IC_LOCATOR, IC_PICK.
The await_event() function receives a pointer to a Cinrep structure from the caller. This structure contains several pointers to client allocated data. The await_event() function throws the pointer to this caller data away, returns a pointer to internal CGI structures, and then frees this same structure.
Thus the caller will get bad data depending on the condition of the heap.

21. Synopsis: cgi: cannot create new view surface tool using Cvwsurf.flags
Release: 3.2

Description:

If the flags field of the Cvwsurf structure is set to VWSURF_NEWFLG, this should bring up a new view surface tool in which to display instead of taking over the WINDOW_GFX window.

In release 3.2, this flag appears to be ignored, so it does not appear to be possible to start CGI on a new view surface tool.

What actually happens is that CGI comes up in the WINDOW_GFX window and no view surface tool appears.

22. Synopsis: suncore: cannot draw vectors on /dev/gpone0a on 3/260C
Release: 3.2

Description:

The sample program below will NOT draw vectors on the raw /dev/gpone0a view surface (outside windows) on a 3/260C.

It should draw a vector from lower left to upper right.

This works on a 3/160C running 3.2Pilot, but not on a 3/260C running 3.2. Thus this may still be a software problem related to 3.2, not the hardware problem with the 3/260C.

Topic: kernel

23. Synopsis: Sun-3 systems with pre 1.6 proms can fail to reboot
Release: 3.2, 3.1, 3.0

Description:

Pre 1.6 monitor depend on a the pmeg which maps the last part of physical memory during start up not to be changed. If it is modified, then when you attempt to reboot the system the screen goes blank and everything hangs with the LEDS being all on. As it turns out, normally the system does not run out of pmegs on a Sun-3 so we don't normally see the problem. But if you beat on the system hard enough, you can run into it.

Thus this is a MONITOR bug. But since we cannot always replace the monitor we can have the kernel kludge around things so that we don't see the problem by reserving the magic pmeg.

24. Synopsis: diag user interface is a mess
Release: 3.2

Description:

This most critical utility is difficult to operate. The following should be added to the documentation:

- entirely different commands are used for SMD and SCSI disks; the "format" command is harmless for SCSIs and deadly for SMDs
- diag is intolerant of errors in initial configuration
- sometimes diag scrambles labels
- diag rarely, if ever, asks for confirmation before wiping out a disk
- erasing a disk's bad block list is much too easy
- there's no way to remove a single entry from a SCSI bad block list
- there's no way to print a list of "slipped" sectors on an SMD disk and no way to "unslip" a sector
- there's no way to copy a standard disk label and modify it slightly

Topic: Network

25. Synopsis: NFS client writes garbage when heavily loaded
Release: 3.2

Description:

The included clntkudp_callit fixes the nfs data corruption problem.

Essentially, the problem is that the client output buffer is being reused eventhough it is still busy. The circumstances under which this occurs are:

1) a reply for a transmission of a certain request is received while waiting for a reply for a subsequent transmission of the same request.
2) another process acquires the client handle which contains the busy output buffer and xdr's data into it prior to the last segment of the output buffer being freed.

The fix is to wait until the output buffer is not busy prior to freeing the client handle.

26. Synopsis: 3.2 in.telnetd incompatable with 3.0 telnet
Release: 3.2

Description:

The following subtle incompatibility affects customers with heterogeneous networks. If you telnet from a Sun running 3.0 to one running 3.2 programs using raw mode will fail; RETURN typed at the keyboard of the 3.0 will always be converted to LINEFEED unless the 3.0 terminal was in raw mode when telnet was invoked.
The problem also manifests with a Bridge cs-100 terminal server.

27. Synopsis: Listen doesn't keep backlog of tcp connections
Release: 3.2

Description:

Listen call will not create a backlog of tcp connections. Setting the backlog to 1 or 0 doesn't give backlog, either.
The source of the connection thinks that the connection is made, exchanges data, and then closes the connection, without the "listening" sun ever seeing the connection in the listen() queue.

Topic: sunview1

28. Synopsis: all menus display with root's foreground and background colors
Release: 3.2, 3.0

Description:

All menus are displayed in the root's foreground and background colors. The cursor can set itself to the appropriate foreground color which it is currently in, so why can't menus.

29. Synopsis: pw_line() draws in window space instead of canvas space
Release: 3.2

Description:

The pixwin function pw_line() draws in window space instead of canvas space. The sister function pw_vector() correctly draws in canvas space.

[Window space is the coordinates visible on the canvas, while canvas space is the coordinate space for the retained image of the canvas pixwin which may be larger than the size of the visible window. This is usually found on a canvas with scrollbars.]

30. Synopsis: Clocktool leaves pseudo-tty screwed up
Release: 3.2,1.1

Description:

Clocktool leaves the pseudo-tty set to a state in which other terminal it to their environment type. (This problem may not be limited to clocktool.) The window programs that use pseudo-ttys need to either close them or lock them somehow so that they cannot be gotten to by other programs using pseudo-tty (inetd).

31. Synopsis: password is echoed in cmdtool console
Release: 3.2

Description:

Password characters are echoed to the screen when starting up a cmdtool console window that is set up to "su" to superuser when coming up.

Topic: Utilities

32. Synopsis: vgrindefs MLisp entry omits "?" as identifier character
Release: 3.2

Description:

The SunOS version of vgrind includes provision for naming the set of characters allowable as part of an identifier in a given language's vgrindefs(5) entry. The entry for Emacs MLisp incorrectly omits "?" from this set of characters.

33. Synopsis: pstat -T wrongly shows full inode table
Release: 3.2

Description:
On Sun-3/260s and 280s "pstat -T" will sometimes show a full inode table when the system is running properly

34. Synopsis: make does not always build objects that it should
Release: 3.2

Description:
The 3.2 version of make does not build objects that it should when the object depends on another object with no build lines. This occurs only on remote files when the server and client don't agree on the time with both pre, and post 3.2 make.

35. Synopsis: tbl never says a table is too wide
Release: 3.2

36. Synopsis: numeric fields fail in "tbl"
Release: 3.2

Description:
A table with columns specified as "n" (numeric field) doesn't format correctly.

Topic: Compiler-- 3.2 fcs

37. Synopsis: "cc -a" (tcov profiling) bug
Release: 3.2fcs, 3.0fcs

Description:
"cc -a" produces message "is_func is confused 91 [[" when confronted with a local definition for a pointer to an array of doubles.

38. Synopsis: Register variable clobbered by subroutine
Release: 3.2fcs

Description:
The following program will produce the output:
r4 != 104 (1).
Thus we can see that r4 no longer is 104 after the call to test1(). R4 happens to be in register d2. D2 is used as a scratch register in test1(). It is neither saved, nor restored in test1()..

```
#include <stdio.h>

int i, j;

test1()
{
  j = i/2 + i%2;
}

main()
{
  register int r9, r8 , r7, r6, r5, r4;

  r9 = 109;
  r8 = 108;
  r7 = 107;
  r6 = 106;
  r5 = 105;
  r4 = 104;

  test1();

  if (r9 != 109) printf("r9 != 109 (%d)\n",r9);
  if (r8 != 108) printf("r8 != 108 (%d)\n",r8);
  if (r7 != 107) printf("r7 != 107 (%d)\n",r7);
  if (r6 != 106) printf("r6 != 106 (%d)\n",r6);
  if (r5 != 105) printf("r5 != 105 (%d)\n",r5);
  if (r4 != 104) printf("r4 != 104 (%d)\n",r4);
}
```

This is a bug in /lib/ccom. The routine that generates special-case code for division by a power of 2 neglects to record all of the registers it uses, so that they don't get saved on entry like they should.

39. Synopsis: C compiler ignoring type casting in if statements
Release: 3.2fcs, 3.1fcs

Description:
Casts of all types are ignored in an "if" statement of this kind. If you look at the compare instruction in the assembly you will see that a "Fcmpd" is generated.

```
main()
{
        double  a,b;

        a = 3.4;
        b = 3.6;
        if( ((int) a) != ((int) b) )
                printf("wrong\n");
}
```

Work around:
If you do the casting outside the "if" statement you can get by.

Try this:

```
main()
{
        int x,y;
        double  a,b;

        a = 3.4;
        b = 3.6;
        x = (int) a;
        y = (int) b;
        if( x != y )
                printf("wrong\n");
}
```

40. Synopsis: dbx
Release: 3.2fcs

Description:
Dbx failed to find source files if the source files has prefix path.

41. Synopsis: dbx where command loops if using complicated f77 expression
Release: 3.2fcs, 3.0fcs

Description:

```
dimension vnew(202)
vnew(i) = dtr/(2.*hr)*(vnew(i+1)-vnew(1))
stop
end
```

The sequence of commands used is:

```
f77 -f68881 -g t.f
dbx a.out
stop at 3 (or stop in MAIN)
run
where
```

You will see that the command hangs. If you look at perfmeter you will see that the cpu is pegged at the top. It seems to be in a loop. If you do not use -f68881 or simplify the expression at all dbx will act correctly. You will get the information 'where' should give you.

Comments:

Tech Support Special Patch tape available.

42. Synopsis: f77 -C can cause "Termination code 139" (core dump of f77pass1)
Release: 3.2fcs, 3.0fcs

Description:

If you compile the following with the -C option f77pass1 will core dump:

```
      subroutine essai
      character line(10)*(20)
      ipa=2
      write(line(ipa),5000)'coucou'
5000  format(a)
      return
      end
```

43. Synopsis: Fortran function "system" broken; library problem
Release: 3.2fcs

Description:
The following program fails:

```
program csy
print *, 'system test'
call system ('echo hi there')
end
```

The error messages are:

```
newunit: [124] too many open files
 logical unit 6, named 'stdout'
 lately: writing sequential list external IO
 part of last format: ext list io
 IOT trap (core dumped)
```

44. Synopsis: mp(3x) doesn't free all the memory it allocates
Release: 3.2fcs

Description:
A program which makes intensive use of the functions in the multiple precision math library (madd(), mult(), mdiv(), etc.) will eventually terminate with a core dump and the message "mp: no free space".

45. Synopsis: Optimizer loses track of address register
Release: 3.2fcs, 3.2pilot, 3.1

Description:
The fprintf statements of the file prints out the correct address for each element of the structure; you can see that when many of them are linked into a single function call, the first 2 are incorrect.

46. Synopsis: Fortran code generator bug
Release: 3.2fcs

Description:

The following Fortran program works correctly when compiled without the optimizer option (-O) and incorrectly when compiled with the optimizer.

```
integer xsen, ysen
real c(2,1), cm(2,1)
c(1,1) = 1.0
c(2,1) = 2.0
xsen = 1
ysen = 2
j = 1
cm(xsen,j) = c(xsen,j) + c(ysen,j)
cm(ysen,j) = c(ysen,j) - c(xsen,j)
write (*,*) cm(1,1), cm(2,1)
end
```

condition	behavior
compiled without "-O" under 3.0, 3.1 (not tested), or 3.2	cm(1,1) set to 3; cm(2,1) set to 1
compiled under 3.0 or 3.1 (3.0 verified, 3.1 not) with "-O"	cm(1,1) set to 0; cm(2,1) set to 1
Compiled under 3.2 with "-O", run on Sun-3/50	cm(1,1) set to 0; cm(2,1) set to 1
Compiled under 3.2 with "-O", run on Sun-3/260	crashes with segmentation violation

Work around:

Don't use "-O"

Topic: Documentation -- 3.2fcs

47. Synopsis: Conflict in doc. when installing a 575 MB disk with 3.2
Release: 3.2fcs

Description:

There is a conflict in documentation for preparing a 575 MB - Fujitsu M2362 Eagle-XT disk for use. The 'Sun 575 MByte Disk Drive Installation Manual' (part number 813-1013-05, rev. 57: June 23, 1986, p. 44 and p. 51) gives the INCORRECT warning in bold face: "EXTREME CAUTION: ABSOLUTELY NO DIAG disk utility functions shoul be performed on cylinders 0, 840 or 841 of the disk drive!!! If this advice is not followed, very important configuration information will be lost!"

However, the 'Installing Unix' manual for release 3.2 (p. 18) CORRECTLY instructs you to run 'format' on all SMD disks and the new 'format' command does not permit selection of which cylinders to format or omit.

48. Synopsis: "fsck: HOLD BAD BLOCK" message undocumented
Release: 3.2fcs

Description:

The fsck error message "HOLD BAD BLOCK" is not documented and is easily misunderstood. The term "BAD BLOCK" is unfortunate, because it implies that there is a formatting defect on the disk drive itself. This is not neccessarily true. The error message will be seen when the status of a given inode is set to all ones (the check is: ((dp->di_mode & IFMT) == IFMT)). This doesn't imply disk damage, only file system damage -- it is possible that this error message would cause someone to unneccessarily reformat their disk thinking they had damage to the disk itself.

49. Synopsis: /usr/lib/aliases and YP mail.aliases uses not clearly documented
Release: 3.2fcs

Description:

The documentation on the format and uses of the /usr/lib/aliases file is sketchy and not very informative (about 1 page in the sysadmin appendix D and aliases(5). There is no information on

how to effectively use the alias system of mail, and no discussion of the trade-offs between using local alias files and the yp global aliases mapped in mail.aliases.

This means that if the user is not already knowledgable about unix/sendmail, they have absolutely no clue as to why these files exist or how to use them.

50. Synopsis: send(2): man page should state what sockets SOF_OOB work on
Release: 3.2fcs

Description:

The man page for send(2) does not state what socket types do and do not support OOB data. Attempting to send and receive OOB data on an AF_UNIX SOCK_STREAM causes the system to panic with an mfree error.

Work around:

Don't use OOB data on an AF_UNIX SOCK_STREAM.

51. Synopsis: "panic: mfree" with AF_UNIX SOCK_STREAM OOB data
Release: 3.2fcs

Description:

AF_UNIX SOCK_STREAM OOB data is not a supported feature of SunOS. The send(2) man page implies that it IS supported. When you attempt to use it, however, the system will panic in recv() with "mfree". The low level code seems to be returning ENOTSUP, but some upper level layer is not recognizing this fact and freeing a non-existant mbuf.

Topic: Graphics

52. Synopsis: CGI GP view surfaces share attributes incorrectly
Release: 3.2fcs

Description:

CGI uses a single GP static block for all view surfaces on a device using the GP. CGI checks the attributes in that block against those for

the current view surface, and sends a block of attribute change commands to the GP if any attributes differ. It doesn't check all attributes in that block, however, so the scaling and offset of polylines (including borders of filled areas) is the same for all view surfaces, regardless of their size or position. Which scaling and offset are used is determined by the last surface to incur a change, either by initial creation, or SIGWINCH after creation.

53. Synopsis: CGI delays delivery of keyboard events from canvas package
Release: 3.2fcs

Description:

CGIPW mode used with canvases causes a delay in delivery of keyboard events from the canvas package. Specifically, if a key is pressed that generates a multiple-character sequence, such as R15, only the first character of the sequence will be immediately delivered. Pressing further keys will cause events to be delivered one at a time, eventually delivering all the characters from the multi-character key, but leaving a backlog of undelivered keypresses. Other IO events, such as mouse

54. Synopsis: Input code is careless about calling free on malloc memory
Release: 3.2fcs

Description:

CGI input code has instances where it frees memory, while leaving around pointers that will later be accessed which point to the freed data.

55. Synopsis: Scaled marker size and line width same on all view surfaces.
Release: 3.2fcs

Description:

When multiple view surfaces are open, and VDC coordinates are being used (ie. not in raw CGIPW mode), the line width, perimeter width, and marker sizes when the specification mode is SCALED are the same on all view surfaces, even though SCALED specifies a percentage of the VDC extent, which will be a different number of pixels on view surfaces of different sizes.

This is because CGI saves these scaled numbers in the single structure pointed to by _cgi_output_att, rather than saving a copy in each view surface structure. Since the scaling varies according to the view surface size, these are clearly per-view-surface values.

lines of text at different angles, and do:

print line_width_specification_mode(1)
print line_width(2.0)

The choice of 2% line width should produce lines in the 2 - 10 pixel range on typical window sizes. Using a large (bigger than 500 x 500) graphics tool as one window, the lines drawn should be perceivably smaller in the view-surface-tool window that CGI will create as the second view surface, if CGI is working correctly. In 3.2 and earlier, they will be exactly the same pixel width, no matter what the relative window size of the 2 view surfaces.

Work around:

None possible in normal CGI mode. In CGIPW mode, the client can do his own scaling, and set line widths using ABSOLUTE rather than SCALED mode.

Topic: Kernel-- 3.2fcs

56. Synopsis: SCSI tape on 3/50 does not report errors properly
Release: 3.2fcs, 3.0fcs

Description:

Configuration: Sun3/52M (includes shoebox)

When trying to write to the second file of a 1/4" tape in QIC-24 format (tar cvbf 126 /dev/rst8 <smallfile>) the application doing the write seems to succeed (no error message from tar) but the tape never moves and the following message is displayed on the console:

st0: stintr: sense f0 0 5 0 0 0 6 3 33 0 0

57. Synopsis: accessing high virtual addresses from kmem crashes kernel
Release: 3.2fcs

Description:

The system crashes with a bus error when given the following sequence of commands:

adb - /dev/kmem

fffffffc/X

This is due to errors in the kernel routine kernacc()
when the virtual address checking wraps around the size of a pointer.
kernacc() will currently cause a bus error any time the virtual
addess given to it is on the last page of a 32 bit address space.

Topic: Network

58. Synopsis: lockf causes nfs files to read past end-of-file
Release: 3.2fcs

Description:

When a remote file is locked, using SystemV-compatible lockf or fcntl, the NFS client code marks the file "don't cache" (RNOCACHE), meaning that blocks of the file are not buffered on the client. The client read code (nfs_vnodeops.c: rwvp()) has a bug in the RNOCACHE case that causes it to ignore end-of-file indications from the server. Thus, while the file is held open (or the name persists in the system name cache), all reads beyond end-of-file seemingly succeed but return garbled data. If the file is not held open by any process, then the condition may persist for several minutes until the name is flushed from the cache.

59. Synopsis: lockf/fcntl on NFS files causes servers to crash
Release: 3.2fcs

Description:

If a client locks an NFS file using System V-compatible lockf or fcntl, it is possible to crash the server. This bug only occurs if the client is reading starting at an offset in the file that is not a multiple of 4, and the data bytes cross a block boundary on the server's filesystem. For example: on a server with a block size of 8K, a NFS client read of 10 bytes starting at an offset of 8191 can cause the server to crash. It is not guaranteed these conditions will result in a server crash.

A workaround is to do all reads in multiples of 4 bytes.

60. Synopsis: panel_create_item misplaces "next" item in panels
Release: 3.2fcs

Description:

When creating items in a panel subwindow, if the item is of type PANEL_CHOICE, PANEL_BUTTON, or PANEL_CYCLE, and the specific x,y coordinates are not given (implying that the panel package knows where to put the "next" item automatically), then the next item that normally goes horizontally adjacent to the previous item, is actually places to the right AND DOWN. The amount of movement down along the y axis is dependent on what the item is. If it's text, then it seems to go the size of the font, if it's an "image", then it's indeterminant.

Topic: Utility

61. Synopsis: 3.2 -lmp routines malloc() but never free()
Release: 3.2fcs

Description:

All of the MP in the -lmp (multiple precision library) routines call the routine move() to do internal storage allocation. move() malloc()s space that is never freed and that is not accessible to the programmer (so he can't free() it for the library). The end result is that any program that uses the -lmp library will grow without bounds and end up using large amounts of swap space.

Comments:

This bug was probably carried in from 4.3BSD.

62. Synopsis: sccs uses delta times for diffs
Release: 3.2fcs

Description:

If one person has his clock set into the future, checks out a file, edits it, and checks it back in, then another person with the correct date checks out, edits, and checks in the file, sccs adds duplicate lines to the file.

63. Synopsis: man doesn't find System-V entry if non-System-V entry exists
Release: 3.2fcs

Description:

The man command is unable to find a System-V manual entry if there is also a non-System-V manual entry, even when specifying a section for man to look in.

Topic: Compiler -- 3.2 pilot

64. Synopsis: bb_link.o causes programs to exit() prematurally on SIGCHILD
Release: 3.2pilot, 3.0

Description:

The block count statistics from bb_link.o / tcov system for measuring test coverage are incorrect if the program receives ANY signal. The affected programs use system(3) and popen(3), pclose(3) to do simple communication between processes. During normal execution, the process receives a SIGCHILD when the child process exits. If any module in the parent has been compiled with the -a switch, the parent executes exit(2) immediately and writes out the test coverage results with no warning.

A closely related problem is a premature exit() with no warning instead of doing a core dump. If the process receives a signal that would produce a core dump, the program will not dump, but will exit() with no warning and print the test coverage results. While these results are technically accurate, they are misinterpreted because the analyst will examine the data assuming that the program executed normally. As one uses the tcov system to refine test cases, it is likely that the program will encounter illegal conditions that would casue a core dump. Exiting normally with no warning defeats the purpose of the test coverage analysis.

65. Synopsis: cc: -f68881 and cast of unsigned to double causes compiler error msg
Release: 3.2pilot, 3.2

Description:

A cast of an unsigned int to double when compiled with the -f68881 fp switch generates a compiler error message;

... compiler error: expression causes compiler loop: try simplifying

66. Synopsis: "adb" gets confused when the stack contains "_sigtramp"
Release: 3.2pilot

Description:

Sometimes, if you try to run "adb" on a core dump where the stack includes a frame created by "_sigtramp" (i.e., a signal was caught and the signal catcher was entered, and a core was dumped in a subsequently-called routine), "adb" gets confused about what routine was called before "_sigtramp" was entered. Currently, this causes a pointer that "adb" assumes can't possibly be null to be null, and "adb" drops core (sometimes on top of the core that you're trying to debug); however, if you protect against dereferencing this null pointer, although "adb" won't drop core it will not be able to tell you what the name of the routine was.

67. Synopsis: "dbx" doesn't understand Sun a.out files
Release: 3.2pilot

Description:

If you run "dbx" against an executable image and a core file, it doesn't understand that the text addresses run from

N_TXTADDR(header) to N_TXTADDR(header) + core.c_tsize

It thinks that the data segment starts at core.c_tsize.

Topic: Graphics -- 3.2pilot

68. Synopsis: cgi: relies on SIGWINCH to open pixwin of view surface
Release: 3.2pilot, 3.0

Description:

CGI relies on a SIGWINCH signal to open the pixwin of its view surface; hence it is impossible to mix CGI and SunView.

69. Synopsis: segment containing text is not clipped properly when scaled.
Release: 3.2pilot, 3.0

Description:

When scaling a segment containing text with the routine set_segment_image_transformation_2(), the graphics (lines) seem to clip properly, but the text appears to wrap at some point.

Topic: System Administration -- 3.2pilot

70. Synopsis: Setup won't use the same machine name for remote tape and yp master
Release: 3.2pilot, 3.0

Description:

If in setup you are installing from a remote host and that machine is also the yp master and you are a yp slave server then setup does not accept the machine name the second time. It gives you the error message: Workstation name "name" is already in use.

71. Synopsis: lookbib doesn't find anything unless indxbib run
Release: 3.2pilot, 2.3

Description:

"lookbib" does not find anything unless "indxbib" is run. According to the manual, "lookbib" creates an foo.ig file, then does an "fgrep" on it to find the string. The file foo.ig is created, but nothing is found.

Topic: Utilities -- 3.2beta

72. Synopsis: lp spooler hangs on initial boot
Release: 3.2beta2

Description:

User has a Sun 3/52 with an Imagen printer connected to ttyb. When he boots his system, lpd spooler hangs during a normal boot, if anything is in the queue.

He must kill /usr/lib/lpd. (Just cleaning the queue is not sufficient).

And kill all lp daemons.

Topic: Compiler -- 3.2beta3

73. Synopsis: fortran does not generate same values for characters as C
Release: 3.2beta3, 3.0fcs

Description:

contrary to p. 85 of the Fortran Programmer's Guide, the backslash escapes are not all compatible with C usage. The \n string generates ASCII 0 instead of ASCII 10.

Topic: System Administration -- 3.2beta

74. Synopsis: setup screen "clients" does not show all supported models
Release: 3.2beta3

Description:

The clients screen in setup does not show all the existing Sun systems. There is no card for model 100, 3/110, 3/260 or 3/280. Nor is there any obvious pointer in the installation documentation to tell the poor installer where to find out what the root and swap sizes are for these systems.

75. Synopsis: DBX Prints multiple lines
Release: 3.2beta

Description:

If you have multiple "stop at" or "when at" statements and the trace statement is within the range of these "stop at" or "when at" statements then the run will print that number of trace statments.
eg: 4 "stop at" statments, 4 "trace" statements.

Topic: kernel

76. Synopsis: SIGIO doesn't work (well) with pipes
Release: 3.2beta

Description:

I wrote 2 processes: the first sets up a SIGIO handler that will read stdin when something appears on it, and the second writes a string on stdout every 5 seconds. When the second is piped into the first, the first process doesn't print any messages, showing that SIGIO does not work well with pipes.

Topic: Compiler -- 3.0

77. Synopsis: atof broken
Release: 3.0

Description:

The final 2 lines of the following piece of code show an off by a billion error.

```
main(argc,argv)
int argc;
char *argv[];

{
double value;
int exp;
double result;

printf("argv[1] = %s, argv[2] = %s\n",argv[1],argv[2]);
value=atof(argv[1]);
printf("%f\n",value);
value=1.0;
printf("%f\n",value);
}
muse% cc t.c
muse% a.out 1.0 2.0
argv[1] = 1.0, argv[2] = 2.0
1072693248.000000
1.000000
```

78. Synopsis: Bug in C Compiler with both -l, -f68881 opts: "opt not in table"
Release: 3.0

Description:

A C program with the if-statement construct "abs(a) > fabs(b) ? true part : else part" compiled with the -l and
the -f68881 options generates the following error message:
"op not in table"

79. Synopsis: adb and dbx on kernels
Release: 3.0

Description:

Running "adb" and "dbx" on operating kernels seems to require distinct invocations of the programs to successfully read and write kernel locations [e.g. to turn on debugging flags]. There appears to be no way to invoke the any debugger without warning messages and at the same time be able to write as well as read kernel memory locations.

80. Synopsis: dbxtool goes into hard loop when multiply forwarded
Release: 3.0

Description:

When dbxtool is hidden and exposed a number of times it goes into a hard loop and crashes. Adb-ing the core on it shows a number of exposures and hides immediately beforehand. More information will be provided as it becomes available.

81. Synopsis: Casting a double to a negative in dbx causes a core dump
Release: 3.0, 3.1

Description:

If you try to cast a double to a negative in dbx or dbxtool it will core dump.

82. Synopsis: Fortran compiler - optimizer w/ -f float point opt infinite loops
Release: 3.0

Description:

Running the Fortran compiler with the -O optimizer option and the -f68881 option causes infinite loops.

83. Synopsis: comparing complex numbers gets undefined routines in the loader
Release: 3.2fcs, 3.0, 2.2

Description:

When trying to compare two complex numbers, I get an undefined routine being returned from the loader.

```
Undefined:
Fc_ne
Fc_eq
```

84. Synopsis: f77 doesn't print '\n' character as newline
Release: 3.0

Description:

Fortran doesn't print the '\n' character as a newline

85. Synopsis: backslashed characters broken
Release: 3.0

Description:

Under 2.2 this program works. Newline and null do not compare. However, under 3.0 the backslashed characters are always a null byte no matter what they are supposed to be.

He also reports that '\\' is not translated correctly. it should be .ascii "\\\0" (three backslashes not two). But it also exhibits the previous error by always having a null byte at the beginning.

```
character*1 newline, null
      newline = '\n'
      null = '\0'
```

```
      if (newline .EQ. null) write(6,100)
100   format(1x,'newline compares EQ to null')
      write(6,200)
200   format(1x,'The End')
      stop
      end
```

86. Synopsis: scaling numbers <= 0.0 broken
Release: 3.0

Description:

The program below will cause a segmentation violation at runtime. any number 0.0 or negative will cause this.

87. Synopsis: scanf EOF bug
Release: 3.0

Description:

The second scanf call in the program below is skipped due to an EOF found by the first scanf call. It should not have been skipped.

88. Synopsis: Running indent on a C program can cause incorrect output
Release: 3.0

Description:

If you run indent on a C program that contains a floating point number with a negative exponential, it will insert spaces and change the meaning of the program.

Topic: Documention

89. Synopsis: documentation on dump omits important point
Release: 3.0

Description:

Dump cannot be used to dump an NFS-mounted file system. The description in Chapter 3 of the 3.0 System Administration Manual (Chapter 3, p. 82) is not current because it describes an out-of-date partitioning method.

Topic: Graphics

90. Synopsis: When using request_input in cgi to read the mouse
Release: 3.0

Description:

When using request_input in cgi to read the mouse, the function loops internally until the specified timeout is reached. It burns up 100% of the CPU while waiting. CGI is actually taking a signal (SIGIO) when the input arrives, so it could sit and wait for the signal, but it does not.

91. Synopsis: cg2_stencil with 8 bit source is unreliable
Release: 3.0

Description:

Calling pw_stencil() with the dw field set to 1 does not display anything. All other widths work (2 and up). Using a width of 1 works on the cgone0 device (not tested), but does not work on cgtwo0 (tested).

Topic: Kernel

92. Synopsis: pty driver does not recognize /dev/pty[r0..rf]
Release: 3.0

Description:

The pty driver returns "no such device or address" for a minor device number greater than 32. Changing NPTY does

nothing since the pty driver is not recompiled at configuration time (unless the user has a source license).

93. Synopsis: flow-control problems with ALM board
Release: 3.0

Description:
There are intermittent flow-control problems with printers operating off an ALM board on a Sun-3. Some of the jobs print ok, but regularly see symptoms of data overruns.

94. Synopsis: MT-02 vs. Sysgen Compatibility
Release: 3.0

Description:
The following operations work fine using a Sysgen tape controller but fail when using an Emulex MT-02. The console displays messages as:

```
st0: stintr: sense f0 0 5 0 0 0 4 3 33 0 0
```

or:

```
st0: stintr: sense f0 0 5 0 0 1 c 3 33 0 0
```

WORKS:

```
tar cf /dev/nrst0 file1
tar cf /dev/nrst0 file2
```

DOES *NOT* WORK:

```
tar cf /dev/rst0 file1
mt -f /dev/nrst0 fsf 1
tar cf /dev/rst0 file2
```

95. Synopsis: hard link to directory causes panic
Release: 3.0

Description:
Making a hard link to a directory causes a panic.

96. Synopsis: init.c hanging on second open
Release: 3.0

Description:

In init.c it is documented that if you do an open, and if it blocks, after 30 seconds it will get kicked out. However, this doesn't seem to be happening with any consistency--especially in the case of init forking itself to a line. If this happens between the 1st and 2nd open, the init will hang forever. It also turns the virtual hangup process into the control terminal. You have to reboot to get this fixed.

97. Synopsis: killing and restarting socket listener causes sender to hang
Release: 3.0

Description:

In 3.0 when a sockets are used to communicate between processes, if the listening process is killed and then is restarted, it causes the talking process to hang.

Under 2.0 it would exit with the error: Broken Pipe.

98. Synopsis: ftp not properly responding to code 451
Release: 3.0

Description:

Customer creates an ftp connection from a Sun to an IBM mainframe. In writing a file to the IBM, the IBM's disk gets full. The IBM sends ftp error code 451 (Requested action aborted: local error in processing) to the Sun. The Sun seems to ignore the error and continues to send data. The IBM resends 451, and the Sun continues to ignore it. The IBM sends FIN, which the Sun acnowledges, but the Sun continues to send. The IBM sends a 0 window size, but the Sun continues to send 1 byte packets. The Sun never times out the connection.

99. Synopsis: suntools panics kernel
Release: 3.0

Description:

We've been seeing consistent (but randomly occurring) crashes of a Sun-2/120 model 1 inside suntools. The setup: Sun2-120 model 1 with SCSI 42 Meg hard disk

Root and swap (and a private user area) filesystem comes off the local disk, /usr over the network from a sun3-160/4 by nfs (the Sun-3/160 has a Sun-2 /usr since it serves only Sun-2 clients). All remote mounts are done with read and write buffers sized 2048 for the 3com ethernet controller. There are several (12, to be exact) other nfs mounts of various file systems on other machines).

100. Synopsis: system dies with "trying to free already free inode" while in setup
Release: 3.0

Description:

When customer ran setup on a fairly straightforward server install of 1 client, the (mini-Unix file system) kernel paniced, giving the error message:

"trying to free already free inode"

This happened 2 out of 4 times. He had not aborted setup and subsequently run it before this happened. Disk label was slightly nonstandard with usr moved onto second disk.

Configuration details:

1. 2-85 mbyte disks
2. Sun-3/85M4
3. 3.0 FCS
4. Has 1 client (also a Sun-3/75M4)
5. 1/4" SCSI tape drive.

Topic: System Administration

101. Synopsis: Tapeless install only works with Class C addresses
Release: 3.0

Description:

Setup as part of a tapeless installation only works if both the tape server and the client have class C internet addresses. It does not operate correctly with Class A and B addresses.

Topic: Utilities

102. Synopsis: 'vtroff -F nonie -me' produces Floating Exceptions with .hl macro
Release: 3.0, 2.2, 2.0

Description:

'vtroff -F nonie -me' produces Floating Exceptions with .hl macro. It seems to be actually caused by the '\l' troff command.

103. Synopsis: bc incorrect in hex fractions
Release: 3.0

Description:

"bc" calculator produces incorrect results when using hex fractions.

Topic: Compiler

104. Synopsis: Dbx complains if pointer has top bits set
Release: 3.0fcs

Description:

If a process passes a pointer argument to a C function that has the top bits set, dbx refuses to do a stack traceback using the "where" command. It give the following error message and returns to command mode:

"core file read error: data space address too high"

Topic: Documentation--3.0fcs

105. Synopsis: cannot use "adb -k /vmunix /dev/mem" as documented
Release: 3.0fcs

Description:

There a problem with adb when debugging the kernel (see 'Debugging Tools for the Sun Workstation', pg.67):

a) with SunOS 3.0:

if called as stated ('adb -k /vmunix /dev/mem') a specific variable (e.g. _kbd_repeatrate) can be examined, but not modified; the error message is: data address not found.

if called with 'kmem' instead of 'mem' it does not work at all. error message: page table botch.

b) with SunOS 2.0:

if called as stated nothing works.

if called with 'kmem' instead of 'mem' everything works fine.

This could be either a documentation or a software bug or both.

Topic: Hardware

106. Synopsis: systems with both mt02 and vpc-2200 suffer tape hangs
Release: 3.0fcs

Description:

Systems configured with both the Emulex MT02 tape controller and the Systech VPC-2200 parallel printer/plotter interface experience tape hangs. Removing a tape leaves the drive in some state that inhibits initializing the tape drive when the next tape is inserted, i.e., this tape is not rewound and the red indicator never lights.

Topic: kernel

107. Synopsis: Unix sometimes gets lost at end of 1/2" tape
Release: 3.0fcs

Description:

Upon occasion a Fujitsu tape drive will pull tape off the end

of a reel when writing.

When reading some tapes, EOT will not be detected. Instead the tape will rock back and forth and reads will apparently complete. I suspect this occurs when no EOF mark is written at EOT; the controlling program is not returned a zero-length record (& apparently the driver doesn't know to return a read error.)

Review of the mtio(4) manual section reveals no way to detect the end-of-tape optical mark.

108. Synopsis: kernel strlen() crashes system if passed null pointer
Release: 3.0fcs

Description:

If the kernel version of strlen() is passed a null pointer, the system crashes.

This can happen if an NFS lookup fails with garbled arguments which causes an attempt to free an unallocated string, involving strlen, thus crashing the system.

Work around:

Make strlen() check for null pointer and return 0 in that case.

Topic: System Administration

109. Synopsis: 3.0 setup doesn't display console error messages
Release: 3.0pilot

Description:

In the textsw in bitmap mode, 3.0 setup displays the exit status only--no console error messages are given.

A customer was running setup, got the following error message:

"command (/etc/ifconfig ec0 myserver -trailers up || /etc/ifconfig ie0 myserver -trailers up) > /dev/null 2>&1 exit status 1"

The problem is that because command output is being directed to /dev/null, there is no way to tell what kind of problem caused the

ifconfig commands to exit abnormally.

Topic: Compiler

110. Synopsis: gcore(1) doesn't make proper core file
Release: 3.0beta2

Description:

I ran gcore against a process that hung, and then ran adb on the core image. "adb" said the file gcore produced was not a core file. Subsequently, I sent a quit signal to the process and got a core file that "adb" accepted.

Topic: Utilities--3.0beta2s

111. Synopsis: lpd does not set crmode properly
Release: 3.0beta2

Description:

Specifying crmode through the fs= line in /etc/printcap does not work in 3.0 beta-2.

Releases prior to 3.0

Topic: Compiler

112. Synopsis: dbx will not allow you to call a subroutine after a ^C
Release: 2.0

Description:

Dbx will not allow you to use call() to access a subroutine subroutine after the program has been stopped by a ^C.

113. Synopsis: dbx-- can't see C source file or locals in C/F77 load module
Release: 2.0

Description:

Make object file with C and f77 routines combined. main() (C routine, calls foo() (FORTRAN routine), which calls foo2() (C rtn). Get into dbx and type "stop in foo2". Then type "run". It will stop in foo2() but will print the assembly language code rather than the source line -- also, can't see local variables.

114. Synopsis: Problems specifying hex/octal/binary numbers in data statements
Release: 2.0, 1.x

Description:

Our Fortran manual specifies an extension that allows the use of hex/octal/binary numbers in data statements. The problem is, this technique produces incorrect assignments.

Topic: graphics

115. Synopsis: text does not transform correctly
Release: 2.0

Description:

Text written to a segment which is to be transformed does not properly clip to the window boundaries even with both window and output clipping enabled.

Topic: sunview

116. Synopsis: Characters lost on multi-character key input
Release: 2.0

Description:

When a key which is mapped into multiple characters (such as, the arrow keys which map into ESCAPE [x where x is A B C or D) is held down for a length of time characters are lost. In particular, where a long sequence of ESCAPE [D should occur because the user is using the left

arrow key to move the cursor back, the loss of characters can lead to sequences such as ESCAPE [ESCAPE [D which is an invalid unparsable meaningless sequence. This means the user cannot use the back arrow key naturally; workarounds include only holding down the arrow key for short periods of time so that characters will not be lost, or not using the arrow keys to effect cursor motion.

117. Synopsis: the escape sequence ^[[l;cH does not work correctly in sunwindows
Release: 2.0

Description:

The ^[[l;cH escape sequence is supposed to position the cursor to the cth character position of the lth line (where c and l are integers, not actually "c" and "l"). For example, "^[[12;43H" takes the cursor to line 12, column 43. This is documented in the 2.0 manuals on the cons(4s) man page. If you omit the l;c parameters, they're supposed to default to 1; in other words, it should home the cursor. The bug is that once you've specified a value for c, the terminal emulator "remembers" this value and uses it for the default instead of 1. So, for this example, the value "43", once specified, remains the default. If you repeat the above sequence the next "^[[H" takes the cursor to (1,43) instead of homing it to (1,1).

Topic: Compiler

118. Synopsis: Fortran optimizer fails while normal compile does not
Release: 2.0beta

Description:

When trying to compile the following Fortran program with the optimizer the following error occurs:

non-TEMP in assignment to be moved in optloop

Compilation is successful without the optimizer.

119. Synopsis: lint and bit-fields
Release: 2.2

Description:

There seems to be no way to cause bit-fields to lint correctly (without invalid warnings) when the fields are passed as arguments to subroutines expecting an argument of type "unsigned ..." - no matter what type casts are used.

120. Synopsis: f77: float expression coerced to int rounds rather than truncates
Release: 2.2

Description:

If you execute the following expression in Fortran, where d1 is a value just under 1.0 and d2 = 1.0 and i is an integer, i becomes the value 2 rather than 1.

```
i = d1*d2 + 1.0
```

Topic: Utilities

121. Synopsis: getty & tty modes
Release: 2.2

Description:

If a process sets FIONBIO on its standard input and then exits without resetting the mode, then most Sun programs such as csh, dbx/dbxtool, adb, etc. will exit also because they are not prepared to deal with EWOULDBLOCK error returns from their reads on stdin.

So far, this is only a problem for the user. But if the errant process sets FIONBIO on the console, then the login process on the console will die. Neither getty nor login nor init is clever enough to resent this terminal mode. The system console is gone until you reboot or find a way to clear the mode by rlogging-in from another machine and writing a program to clear the mode.

One of getty, login, or init should reset the FIONBIO mode.

SunOS -- Section 3

Topic: Compiler

122. Synopsis: compiler error: no table entry for op REG
Release: 3.2

Description:
Too many register variables causes compiler error.

123. Synopsis: dbx does not handle f77 dummy dimensions correctly
Release: 3.2

Description:
"dbx" does not handle Fortran dummy arrays properly. When you print out what the array subscripts are, you get incorrect information.

124. Synopsis: dbx dies if told to print the negative of a "double"
Release: 3.2

Description:
When given a (double) floating point variable (say, "x") and told to print its negative:

```
(dbx) print -x
```

"dbx" gives a fatal error message

```
dbx: popsmall: size is 8
```

The same problem occurs in an assign (where x and y are both "double"s):

```
(dbx) assign x = -y
```

125. Synopsis: f77 error - nonarithmetic operand of arithmetic operator
Release: 3.2, 3.0

Description:
The fortran compiler outputs an error message "nonarithmetic operand of arithmetic operator" when comparing a logical variable with a logical constant.

126. Synopsis: -f68881 disallowed on Sun-2.
Release: 3.2

Description:

/lib/compile disallows the combination -m68010 and -f68881. This affects fortran, pascal, c, and probably modula-2.

127. Synopsis: invalid floating-point options don't generate error
Release: 3.2

Description:

The combinations -fsky & -m68020; -ffpa & -m68010 generate a warning rathe than an error in fortran, pascal, c, and probably modula-2. Subsequently code is generated -fsoft. Since only a warning message is printed, the results may be quite different from what was intended but never noticed. These combinations should be fatal errors.

128. Synopsis: specifying '\\' does not work in strings
Release: 3.2, 3.0

Description:

The following program and its output illustrate that specifying '\\' does not work in strings:

```
      CHARACTER STR1*(*), STR2*(*), STR3*(*), STR*22

      PARAMETER (STR1='abc', STR2 = 'd\\e', STR3 = 'fg')
      STR= STR1//STR2//STR3

      WRITE (6,*) STR
      WRITE (6,*) STR2

C     \\'s in a Format string literal do work okay...
      WRITE (6,20)
   20 FORMAT ('abc\\def')

      END
```

This produces:

```
% a.out
 abcdefg
 de
```

```
abc
ef
%
```

You would expect:

```
% a.out
 abcdefg
 d\
abc
ef
%
```

Work around:

Use '\\\\' instead.

129. Synopsis: Everything after '\0' in a string is ignored
Release: 3.2, 3.0

Description:

This program and its output show that everything after '\0' in a string is ignored:

```
CHARACTER STR1*(*), STR2*(*), STR3*(*), STR*22

PARAMETER (STR1='abc', STR2 = 'd e', STR3 = 'fg')
STR= STR1//STR2//STR3

WRITE (6,*) STR
WRITE (6,*) STR2

 END
```

This produces:

```
muse>> a.out
 abcd
 d
muse>>
```

You would expect to see an 'e' after the 'd' on the second line.

130. Synopsis: "ioctl" in S5 environment doesn't set modes correctly
Release: 3.2

Description:
If you try to set the terminal modes to support a full 8-bit data path in the S5 environment by:

turning off ISTRIP
turning off PARENB and PARODD, and setting the character size to CS8
turning off OPOST

it will properly set the output data path to 8 bits (by turning on LITOUT) but not properly set the input data path to 8 bits (by turning on LPASS8).

131. Synopsis: lint "-n" flag can't be bundled with other flags
Release: 3.2

Description:
"lint" has a "-n" flag that tells it not to check functions against the definitions in the "lint" library for the standard C library. In the old "lint" shell script, the "-n" flag could be bundled with other flags, so that "lint -hbxn" would set the "-n" flag as well as the "-h", "-b", and "-x" flags. This does not work with the new "lint" command, implemented as a symbolic link to "/lib/compile".

132. Synopsis: /lib/c2 breaks programs with odd size structure arguments
Release: 3.2, 3.0

Description:
When the peephole optimizer /lib/c2 encounters a sequence of the form

```
(*)     subql  #N,sp
        lea    sp@(M),sp
```

it reduces it (incorrectly) to

```
        lea    sp@(N-M),sp
```

The correct reduction is:

```
        lea    sp@(M-N),sp
```

There are two cases where (*) occurs in compiler-generated code:

(1) when an inline expansion template is used
(2) when a structure is passed by value, and the total size of the argument list is not a multiple of 4.

In case(1), M-N == 0, and both instructions are deleted. Thus only case(2) is a problem.

133. Synopsis: Re: C compiler
Release: 3.2, 3.1, 3.0

Description:
The peephole optimizer /lib/c2 keeps a table of memory operands known to be equivalent to cheaper operands (constants or registers) This table can become inaccurate when overlapping memory operands are modified, so that the cheaper operands are no longer equivalent. Subsequent code based on the data in this table may be incorrect.

Topic: Documentation

134. Synopsis: cgi doc: await_event IC_STRING example WRONG.
Release: 3.2, 3.0

Description:
The example program in the CGI manual on page 94 does not work correctly. This example attempts to read a string from the keyboard.

Problems:

1. The string returned by await_event() is not correct. It appears to be some other string in the programs data.

2. The functions disable_events(), dissociate(), and release_input_device() have passed the define IC_STRING, instead of devclass.

3. The documentation for await_event() states that the user must supply a string to be

copied into from the queue. The inrep ivalue does not have a client char array associated with it.

135. Synopsis: fstab entry for sun-3 mounting from a 3com sys not documented
Release: 3.2

Description:

When a Sun-3 system with a Sun ethernet board NFS mounts a filesystem from a system (sun-2 only? I don't know) that has a 3com ethernet board, extra entries are required on the /etc/fstab line to make it work successfully. The Sun-3/ie machine pumps out packets so fast that the 3com system can't keep up. The rsize and wsize of packets has to be limited, or else you get lots and lots of retransmissions and "server not responding" msgs. This was documented in the 2.0 to 3.0 Change notes (or release notes), but is not noted in the 3.2 manual set. It needs to be in the System Administration manual in the section covering networking and NFS.

Work Around:

The line in /etc/fstab needs to be of this form:
3com_machine:/usr /usr nfs rw,noquota,soft,rsize=2048,wsize=2048 0 0
(the rsize and wsize entries are what is relevant)

136. Synopsis: undocumented diag behavior: now warns about SCSI reset
Release: 3.2

Description:

The documentation on "diag" should be updated to include the fact that currently the first words "diag" prints after initialization indicate the resetting of the SCSI bus. The documentation currently incorrectly states that the first words "diag" prints after initialization are status: xxxx xxxx.

137. Synopsis: "Configuring...Kernel doesn't describe device abbreviations
Release: 3.2

Description:
The "Configuring the System Kernel" chapter in "Installing UNIX on the Sun Workstation" doesn't have a description of the abbreviations in a configuration file. The user must go to /dev/MAKEDEV to find out what the abreviations mean.
Work around:
Look at /dev/MAKEDEV.

138. Synopsis: eeprom scc baud rates
Release: 3.2

Description:
Installing Unix On the Sun Workstation, Appendix D - "The PROM Monitor and the EEPROM", table D-3, "EEPROM Address Space Allocation" contains the following entries:

0x58	SCC Port A Baud Rate
0x59-0x5A	Baud Rate in hex
0x5B	Port A DTR/RTS select
0x60	SCC Port B Baud Rate
0x61-0x62	Baud Rate in hex
0x63	Port B DTR/RTS select

The values that are meaningful in 0x58, 0x5B, 0x60, and 0x63 and the the order of the bytes in 0x59-0x5A and 0x61-0x62 are not included.
Work Around:
Here's part of the needed information:
For port A
Location 0x58 determines default 9600 (00) or user specified (12)
(what does 13 do?)
Locations 0x59 and 0x5a define the baud rate

300	01	2c
600	02	58
1200	04	b0
2400	09	60
4800	12	c0
9600	25	80
19200	4b	00
38400	96	00

139. Synopsis: login man page does not mention /etc/securetty
Release: 3.2

Description:

The man page on /bin/login does not mention the /etc/securetty file which is used to restrict root logins to 'secure' ttys.

The only method to find about securetty is to already know about it or look in source.

140. Synopsis: Errors in sh (1) manual entry
Release: 3.2

Description:

Errors in printed sh(1) UNIX manual entry: most are in "Parameter Substitution" section. Each occurrence of the character '%' should be replaced with '$'. Also, in the "Comments" section, the character '-' should be replaced by '#'.

141. Synopsis: tty(4) man page missing TIOC{G,S}SIZE and TIOC{G,S}WINSZ
Release: 3.2

Description:

The tty ioctl's TIOCSSIZE TIOCGSIZE TIOCSWINSZ and TIOCSWINSZ are not documented in the tty(4) man page.

Work Around:

The necessary information follows.
These ioctls are used to get/set the size of the tty.
Currently TIOCGSIZE is identical to TIOCGWINSZ.
TIOC{G,S}WINSZ is part of 4.3, while TIOC{G,S}SIZE appear to be sun specific.

142. Synopsis: csh_builtins.1 man page won't print as expected
Release: 3.2

Description:

If /usr/man/cat1/endsw.1 does not exist, and "man endsw" is executed

from any directory other than /usr/man, "man endsw" will not work.

The problem is that man treats manual pages which begin with ".so" specially; manual pages with embedded ".so" don't work. Acutally, .so's further down need absolute pathnames.

Topic: Graphics

143. Synopsis: suncore: fat lines not completely removed when run on raw gpone0a
Release: 3.2

Description:

The below program does not work correctly when run on the raw gpone0a view surface (outside windows).

The program draws two fat lines which cross and then removes them by deleting the segment.

When run on the raw gp view surface, the endpoints of the lines are not completely erased. The endpoints really are circles or arcs.

Topic: kernel

144. Synopsis: cannot set MAXUSERS > 24 on 3/260 system w/ Xylogics disks
Release: 3.2

Description:

When configuring a kernel, one cannot set MAXUSERS >= 24 on a 3/260 with Xylogics disk or the kernel will panic: memall. The number 24 is not absolute, I tried 16, 24 and 32 and it fails on 24 and 32, but works on 16.

Note: This problem may affect other systems w/ xy disks, but not been tested there. I did try this on a 3/160 with SCSI disks but it worked okay.

Work around:

Technical support patch available.

Topic: Network

145. Synopsis: diskless clients can't reboot if their ethernet address is changed
Release: 3.2, 3.0

Description:

If a diskless machine changes its ethernet address with ifconfig then it can't reboot unless the arp table of its server is modified by hand. This bug keeps decnet from running properly.

146. Synopsis: nfs client caching has protection problems
Release: 3.2

Description:

Apparently, there is client side caching going on that latches [bad] permissions for files accessed over the nfs. If I have a file, eg, my mbox, that is mode 600, and I try to first read it as root, the access fails. However, if I then turn around and try and access it as myself, it fails as well! Likewise, if I access a file as myself, then root can see it too, until I try and remove it as root, then no one can see it.

147. Synopsis: "ping" sends bad packets if length is odd
Release: 3.2

Description:

The IP checksum routine in the "ping" command is incorrect. If the packets to be sent contain an odd number of bytes, they will have a bad checksum, and the remote host will not respond to them.

148. Synopsis: rpcinfo doesn't work on non-networked systems
Release: 3.2

Description:

Rpcinfo will not work on a standalone (non-networked) machine.

Work Around:

Use loopback rather than gethostname()

149. Synopsis: telnet from a Vax to the Sun fails
Release: 3.2

Description:
Telneting from a Vax(4.4 VMS) to a Sun running 3.2 will fail but telneting from the Sun to Vax will succeed. According to the customer:
1. login prompt is displayed
2. he specifies his login name and hits <CR>
3. the first <CR> is not interpreted consequently he hits <CR> for the second time.
4. the second <CR> is acknowledged as the passwd entry and the program exits with an invalid passwd entry message.

Topic: Bourne Shell

150. Synopsis: sh: if login from a csh user, ^C no longer works.
Release: 3.2

Description:
If a csh user logs in as a sh user vi login, ^C interrupts no longer work. A csh must be started, or the user must log out and log in again.

Topic: Sunview1

151. Synopsis: the attribute WIN_FONT does not work for a ttysw
Release: 3.2, 3.2pilot, 3.0

Description:
setting the attribute WIN_FONT when creating a tty subwindow does not seem to do anything. The tty subwindow STILL uses the default_font.

152. Synopsis: sunview: window_loop on a TEXTSW brings up an empty window
Release: 3.2, 3.0

Description:
A confimer frame which contains a TEXT subwindow that

is brought up via window_loop() will display a subframe
which has an empty region where the textsw should be.
This empty region is a see-through window where the
underlying original screen is still visible.
Typing into this window region has no apparent effect.

153. Synopsis: sunview: window_loop() cannot display CANVAS confirmer frames
Release: 3.2, 3.0

Description:

window_loop() does not fully display a confirmer subframe
which contains a CANVAS window.

The canvas window appears as part of the confirmer frame,
but the canvas rect is see-through to whatever was on
the screen underneath.

The event proc for the canvas does receive events.

154. Synopsis: sunview: window_loop confirmer frames cannot have > 1 subwindow
Release: 3.2

Description:

A confirmer frame brought up via window_loop() cannot
have more than one subwindow in that frame.

155. Synopsis: pw_putcolormap() doesn't immediately update the colormap if window is
Release: 3.2

Description:

When using a colormap of size 256, the routine pw_putcolormap()
does not take effect until the mouse is moved out and back in
to the window. A colormap of size < 256 seems to work as expected.

156. Synopsis: Click-to-type doesn't work in a PANEL with no text fields
Release: 3.2

Description:
Click-to-type will not changed the keyboard focus to a PANEL with no text items, not even if PANEL_ACCEPT_KEYSTROKE is specified.

Topic: System Administration

157. Synopsis: csh filename completion inoperative in csh cmdtool
Release: 3.2

Description:
The ESC mechanism of csh in 3.2 which should provide filename completion does not work in cmdtool.

158. Synopsis: improper TERMCAP entry for tvi925
Release: 3.2

Description:
The following commands cause vi to not work properly when using a wyse 50 terminal in vti 925 emulation mode:

```
set term=925
unsetenv TERMCAP
vi filename
```

The problem is seen when the file contains lines that are longer than 80 characters and wrap.

Topic: Utility

159. Synopsis: vi - ":$r" does not undo properly
Release: 3.2

Description:
The "undo" command ("u") in "vi" does not work properly when used

with ":$r"

160. Synopsis: Mail, v command doesn't set current message
Release: 3.2, 3.0

Description:
Make does not do sccs get correctly on Makefile include files. The get is done to the SCCS directory instead of the proper destination directory.

161. Synopsis: rdist doesn't preserve set[gu]id bits
Release: 3.2

Description:
Execute the following shell commands on machine A:

```
echo > /tmp/rdist-bug
chmod 6744 /tmp/rdist-bug
```

Create the following file as /tmp/rdist-distfile, where B is the name of some other machine that trusts A and vice versa:

```
setguid-demo:
        /tmp/rdist-bug -> B
            install ;
```

On machine A, execute the command "rdist -f /tmp/rdist-distfile" and then observe the mode of the resulting file on machine B.

162. Synopsis: kadb(8) must be patched for use on diskless Sun-3
Release: 3.2

Description:
Kadb must be patched for use from a diskless Sun-3. The variable ndbootdev must be patched to 0x41.
Work around:
Patch as decribed above.

163. Synopsis: du can fail with nfs-mounted file structure
Release: 3.2

Description:
"du" relies on the dbtob() (data blocks to bytes) macro of <sys/param.h>. dbtob() applies only to 4.2-mounted file systems; it can be wrong for file systems nfs-mounted from a machine which uses a different block size.

164. Synopsis: grep -i does not work properly
Release: 3.2

Description:
"grep -i" does not properly matchstrings which have an uppercase character after a closure.

165. Synopsis: terminal option column is incorrect
Release: 3.2

Description:
The procedure below will set terminal option column to 65428.
"vi" will announce screen too large for internal buffer.

shelltool -Ws 898 511 -Wt /usr/lib/fonts/fixedwidthfonts/sail.r.6

In the shelltool rlogin to any 3.2 system.
On the remote machine execute "stty all"

Topic: Compiler

166. Synopsis: Customer generated assembly can cause "Multiply defined symbol"
Release: 3.2fcs, 3.0fcs

Description:
There are cases of assembly programs with no errors that cause the assembler to scroll the following error message:

as: error (t.s:36277): Multiply defined symbol (phase error)

The message is associated with very long jumps in the code. If you use the -j option to the assembler to correct this during the assembly the resulting .o causes the loader to choke.

The result of -j does not work with the loader. This is not a problem with the loader but with the assembler.

167. Synopsis: C compiler core dumps
Release: 3.2fcs

Description:

c compiler core dumps on the following program

```
char foo[3][256] = { "one"; "two"; "three"; };

main()
{
    int i;
    for (i = 0; i< 3; i++)
        printf("%s0, foo[i]);
}
```

168. Synopsis: compiler error: no table entry for op REG
Release: 3.2fcs

Description:

The C compiler is unable to compile a unary not of a float or double function call with the 68881 float option on.

169. Synopsis: ccom deletes necessary small integral conversions
Release: 3.2fcs

Description:

The C compiler sometimes deletes a necessary widening integral conversion.The program below should run to completion with no output. In 3.2FCS, it terminates with an error message.

```
% cat bug.c
#include <stdio.h>
```

```
#include <assert.h>

static int one(), two(), three();

main()
{
    assert( one(0x1000, 0x101) == 0x1001 );     /* this works */
    assert( two(0x1000, 0x101) == 0x1001 );     /* this works */
    assert( three(0x1000, 0x101) == 0x1001 );   /* this fails */
}

/*
 * this works
 */
static
one(x,y)
    register int x,y;
{
    x = x + (char)y;
    return x;
}

/*
 * so does this; note that there is an implied
 * (char)=>(int) conversion generated according

  * to the rules of the "usual arithmetic conversions"
  */
 static
 two(x,y)
     register int x,y;
 {
     x += (char)y;
     return x;
 }

 /*
  * this doesn't work, because an implied (char)=>(short)
  * conversion got deleted by the code generator
  */
 static
 three(x,y)
     register short x,y;
 {
     x += (char)y;
     return x;
```

```
}

% cc bug.c
% a.out
Assertion failed: file bug.c, line 10
%
```

Work around:

In the example above, functions one() and two() illustrate two workarounds for the problem in function three().

170. Synopsis: dbx
Release: 3.2fcs

Description:

Dbx core dumps when debugging a file without symbol table.

171. Synopsis: REAL PARAMETER produces bad error message
Release: 3.2fcs

Description:

Using a REAL parameter for an array dimension produces the error message "adjustable dimension on non-argument". This is confusing. For example, the following program fails:

```
parameter (arrsize=1000)
dimension arr(arrsize)
end
```

The error message is: "Error on line 3 of pararr.f: Declaration error for arr: adjustable dimension on non-argument".

The following program succeeds:

```
parameter (iarrsize=1000)
dimension arr(iarrsize)
end
```

172. Synopsis: "f77 -a" generate bad code causes core dump
Release: 3.2fcs

Description:

The compiler put out code for statement profiling is wrong, some variable is used before it is initialized.

173. Synopsis: initgroups(3)/getgrent(3) causes malloc'd memory overwritten
Release: 3.2fcs

Description:

If initgroups(3) is called two times, the second call results in the following error message from free, indicating that malloc'd buffers are overwritten:

free: bad block size (1919118906) at 0x27850

Examination of the core dump shows the offending call to free occurs in getgrent(3) (getnextfromyellow), which is called from initgroups. The contents of the malloc'd memory are strings from the groups file.

This bug is reproduced when the test program is compiled with the debugging malloc module, /usr/lib/debug/malloc.o.

174. Synopsis: 3.2FCS /etc/group -- misformed data not handled properly
Release: 3.2fcs

Description:

Malformed entries in the /etc/group file (or the group YP database) will cause initgroups() to stop when it reaches them. This means that some of the groups that a person is supposed to be in won't be put into their environment.

Topic: Documentation

175. Synopsis: on(1C) should have the bugs section amended-- ^Z (CTRL-Z) hangs window
Release: 3.2fcs

Description:
There is information missing in the bugs section of on(1C).
Work Around:
The missing information is that
if on(1C) is running, then entering a Control-Z will hang the window
over nfs mounts.

176. Synopsis: yppasswd(8c) man page is wrong
Release: 3.2fcs

Description:
The common practice of using a yp password file distinct
from is not documented in the yppasswd(8c) manual page. An
example is given, but nowhere is it explained.
Work around:
Have customer call customer service.

177. Synopsis: WIN_RECT not well documented
Release: 3.2pilot, 3.2fcs

Description:
When the cursor is on the surface where drawing occurs, if the
pixwin is locked with pw_lock, sometimes the region which the
cursor rect resides is not drawn to. (or possibly is drawn to,
but with the incorrect op) Thus results in an empty
region (16x16) when the cursor is moved.
Work Around:
When redisplayed, the image is put to the correct state.

178. Synopsis: Missing footnote on p. 38 of 3.2 SunView manual
Release: 3.2fcs

Description:
See the SunView Programmers Guide, Part Number 800-1345-10,
Revision A of 19 September 1986

On p. 38 is the sentence

> Our example has specified a font by first opening the font with pf_open(), then passing it into the panel
> 9
> as WIN_FONT.

But there is no footnote numbered "9".

Work around:

Treat the following NOTE as the footnote.
Erroneous footnote mark has been removed; fix will show up in next reprint.

179. Synopsis: order of arguments for FRAME_ARGS mis-documented
Release: 3.2fcs

Description:

Sunview Programmer's Guide, Revsion A of 15 October 1986. Error is on page 51 in the window_create() example. The two arguments following FRAME_ARGS are "argv, argc" whereas they ought to be "argc, argv" as correctly documented on page 334 of the same manual.

180. Synopsis: gettimeofday(2) manual page unclear
Release: 3.2fcs

Description:

This section of the Unix Programmers Manual, section 2, gettimeofday, is unclear:

```
struct timezone {
    int  tz_minuteswest;    /* of Greenwich */
    int  tz_dsttime;    /* type of dst correction to apply */
};
```

The timezone structure indicates the local time zone (measured in minutes of time westward from Greenwich), and a flag that, if nonzero, indicates that Daylight Saving time applies locally during the appropriate part of the year.

What this is saying about tz_dsttime is that it is nonzero if DST is understood by the kernel and the kernel thinks DST applies at

some time during the year where you live. It does not tell you whether DST currently applies, even though it looks like that is what it does.

A second problem is that the nonzero return values have meaning which are documented in /usr/include/sys/time.h, but this is not mentioned anywhere.

Work around:

Here is the current info:

```
#define     DST_NONE     0     /* not on dst */
#define     DST_USA      1    /* USA style dst */
#define     DST_AUST     2     /* Australian style dst */
#define     DST_WET      3     /* Western European dst */
#define     DST_MET      4     /* Middle European dst */
#define     DST_EET      5    /* Eastern European dst */
#define     DST_CAN      6     /* Canada */
```

The document should say that the value returned tells what kind of DST applies and that if you need to know what it means, see sys/time.h.

181. Synopsis: shmop(2) man page: what addresses are illegal?
Release: 3.2fcs

Description:

The shmop(2) manual page doesn't say which shmaddr's are legal.

Work around:

Have customer call software support if needed.

182. Synopsis: stty has 16 undocumented options
Release: 3.2fcs

Description:

134.5, 38400, LCASE, cols, columns, gspeed, noflsh, noisig, nopost, pass8, rows, size, stopb, 33, 35, and 05 are all undocumented options of stty. In particular, there is no workaround for certain telnet problems if one doesn't know about "rows" and "cols".

Work around:

Have customer ask customer support.

183. Synopsis: ascii(7) man page says chart is decimal but is octal
Release: 3.2fcs

Description:

3.2 man page, ascii(7), now has headings for each conversion table, but the first heading is incorrect. It says 'Decimal - Character' but actually contains octal info.

184. Synopsis: telnetd(8C) incorrectly reports 16-pseudo-tty limit.
Release: 3.2fcs

Description:

The 3.2 telnetd(8C) incorrectly reports under the BUGS heading 'telnetd can only support 16 pseudo terminals.'

This restriction/bug only applies to the pre-3.2 releases. The 3.2 version of in.telnetd has been modified, making it capable of handling 64 pseudo-ttys, if available.

Topic: Graphics

185. Synopsis: CGI rectangle perimeters misplaced
Release: 3.2fcs

Description:

A CGI rectangle may be filled (solid, patterned, etc.), and/or the perimeter drawn. If the perimeter is drawn, CGI draws it in the wrong place on the screen.

The bug occurs in GP/CG2 or BW2, using PIXWINDD. The bug appears whenever a window offset is nonzero in X or Y. This doesn't happen in CGIPW mode using user-documented CGI routines. It may not happen on "raw" devices.

186. Synopsis: Ccgiwin descriptor causes problems with CGIPW primitives
Release: 3.2fcs

Description:

The efficiency and correctness of several CGIPW functions are compromised by the structure of the Ccgiwin handle that clients use to communicate with output primitives and attribute setting functions. It currently contains a pixwin handle and an attribute pointer, but not a view surface pointer. The view surface pointer can be found inefficiently by an internal CGI function that linearly searches the view surface table, but some functions that should call this function do not, and the ones that do call it suffer a performance penalty by having to do so.

187. Synopsis: Invalid CGIPW Ccgiwin descriptor causes segmentation violation
Release: 3.2fcs

Description:

CGIPW functions are called with a descriptor that contains a pointer to an allocated structure. This pointer is not checked for validity by CGIPW functions that get the descriptor passed to them, nor is the pointer set to a known bogus value by open_cgi_pw, or open_vws_special, the two functions that return new Ccgiwin descriptors.

This can cause CGIPW functions to get segmentation violations and/or write over memory, with the possibility of causing obscure behavior on the part of CGI or the client code that uses CGI.

188. Synopsis: cgipw_set_vdc_extent fails if using more than one view surface
Release: 3.2fcs

Description:

Cgipw_set_vdc_extent (a new SunCGI extension in 3.2) will only work correctly if just one view surface is in use, because it doesn't set the global _cgi_output_att pointer that determines which scaling parameters are used by the _cgi_devscale function. Since _cgi_devscale is used by _cgi_windowset, which is called by cgipw_set_vdc_extent to set scaling, it will use the

current _cgi_output_att, which will have been left set correctly
by open_cgi_pw when the single view surface in use was opened.

Topic: Kernel

189. Synopsis: lockscreen with -e option crashes with vmcore file on Prism.
Release: 3.2fcs

Description:

Lockscreen can be used with 3 different arguments, one of them is the -e option in the command line. Using this option will allow an exit desk-top which takes you out of suntools and logs you off. Using this option on a 12 slot configuration Prism/Sun3-110 will cause a vmcore and panic the system when the exit desk-top button is clicked.

190. Synopsis: cannot build Sun-3 kernel from source if SUN3_260 not defined
Release: 3.2fcs

Description:

3.2 Sun-3 kernel cannot be built if SUN3_260 is not defined in the config file. Make complains that vac_flushall() is undefined.

191. Synopsis: boot causes diag not to quit when requested
Release: 3.2fcs

Description:

The diag does not behave correctly when issued the 'quit' command due to the 3.2 /boot program.

With the 3.0 diag, running the 'quit' command drops you to the PROM monitor, e.g.,

```
diag> quit
>
```

With 3.2, the 'quit' command just starts up diag again, e.g.,

```
diag> quit
```

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...

Copying the 3.2 /boot to the above 3.0 machine caused the same problem with the 'correctly working' 3.0 stand/diag.

192. Synopsis: standalone copy does not exit to PROM monitor when complete
Release: 3.2fcs

Description:
The standalone copy does not exit to the PROM monitor after completing the copy when booted from disk or over the network.

With the 3.0 standalone copy, when the copy completes, it drops you to the PROM monitor, e.g.,

....
Copy completed - number bytes
>

With 3.2, standalone copy just starts up again, e.g.,

....
Copy completed - number bytes
Standalone Copy
From:

193. Synopsis: Readlink bug in Sun OS 3.2
Release: 3.2fcs

Description:
When you make a readlink() call against a special device, the readlink call returns garbled data. This bug was posted to USENET, and has been verified against 3.2FCS. The same program compiled and tested against 2.2 does NOT fail, so this has been introduced recently.

Topic: Network

194. Synopsis: If the yellow pages are down, you can't log in.
Release: 3.2fcs

Description:

If you disable the yellow pages (for instance, by reaching behind your machine and disconnecting the ethernet cable, or by entering the command "ifconfig ie0 down"), you will no longer be able to log onto your machine or use "su". Eventually, you get an error message about yp not responding for domain sun.wseng.com.

Topic: C Shell

195. Synopsis: csh dumps core if history reference in backquotes
Release: 3.2fcs

Description:

The C shell will dump the core for history references enclosed in backquotes. For example

% '\$'

or

% echo '*'

Topic: Sunview1

196. Synopsis: textsw glyph off end of file causes crash
Release: 3.2fcs

Description:

Painting a textsw glyph off the end of a file causes a core dump.

Work around:

Use dbx instead of dbxtool or change the use path.

197. Synopsis: Problem when bottom of TextEditor window below screen.
Release: 3.2fcs

Description:

After a few TextEditors are brought up using the menu, the bottom of one of windows will be off the bottom of the screen. Without moving the window, if a large file is read into the window and the window is then scrolled, the last line will constantly be redisplayed. There is no data corruption in the file.

Work Around:

Once the window has been moved or a redisplay is done, everything works okay.

Topic: System Administration

198. Synopsis: Prism config files are missing
Release: 3.2fcs

Description:

The Prism config files /usr/sys/conf/ND110 and /usr/sys/conf/SDST110 are missing.

Work around:

Create a suitable config file from GENERIC.

Topic: Utility

199. Synopsis: Nested ".so"'s don't work
Release: 3.2fcs

Description:

Nested .so's don't seem to work in 3.2fcs. After entering the command

```
man umask
```

on 3.2fcs, the following response is seen:

```
reformatting page - wait
can't open man1/csh.1
```

All man pages that have .so in the files called by a .so return this error response.

200. Synopsis: screendump won't work if anything moves
Release: 3.2fcs, 3.0fcs

Description:

Customer does a screendump then does the screenload. Because he had clocktool running with the second hand the dump is corrupted and screenload is garbage.

Work around:

There are two possible workarounds:

1) turn off any updating of the screen before the dump (switch off the second hand on the clock, kill any perfmeters, use defaultsedit to switch off the blinking text caret, etc)

2) manage to lock the screen somehow during the screendump. For example, use the command "sleep 10;screendump" to give some time to pop-up a menu. The menu will lock the display and stop race-condition being experienced. The shortcoming is that the menu will show up in the screendump.

201. Synopsis: ^Z (Control-Z) when on(1C) is invoked is not recognized
Release: 3.2fcs

Description:

If on(1C) was invoked by running Unify's SQL (it does a dbon) then entering a Control-Z will hang the window over nfs mounts.

Work around:

Keep L.sys entries short!g

202. Synopsis: uuname can not handle long L.sys entries
Release: 3.2fcs, 3.0fcs

Description:

If given a very long L.sys line, uuname will choke on it and send out spurious host names that include part of the long L.sys line (this is a possible security breach). This is because uuname has a hard coded 256 char buffer for storing these things in, and truncates the line to that size without flushing the rest of the entry.

203. Synopsis: SYSTEMNAME s/b NAMEFILE in uucpname.c
Release: 3.2fcs

Description:
In order to get uucp to find the uucpname in "/usr/lib/uucp/SYSTEMNAME" uucp must be recompiled after defining UUNAME in uucpname.h. In uucpname.c line 45 the line:

```
if (((uucpf = fopen(SYSTEMNAME, "r")) == NULL &&
```

Should be:

```
if (((uucpf = fopen(NAMEFILE, "r")) == NULL &&
```

As NAMEFILE is defined in uucp.h (line 31). If the change is made to uucpname.h without makeing this modification then the make will fail as SYSTEMNAME is not defined.

Work around:
Simplify the expression by having some of the subexpressions evaluated into temporary variables.

Topic: Compiler -- 3.2 pilot

204. Synopsis: dbx running under dbxtool dies on a "print" command.
Release: 3.2gamma

Description:
dbx running under dbxtool dies on a "print" command. The error message printed when the process is killed is:

```
dbx: internal error: reference through nil pointer at line 134 in file
        languages.c
The initial command was:
        print ($fp + 8)
```

205. Synopsis: dbx uses the wrong filename after "up" or "down" and won't set breakpoin
Release: 3.2pilot

Description:

After stopping at a breakpoint in dbxtool, I do "up" one or more times, select a line, and attempt to set a breakpoint using the "stop at" button. The "expand" feature for this button generated:

```
stop at "./../src/gp1_prims.c":80
```

causing dbx to complain:

```
file "./../src/gp1_prims.c" was not compiled with the "-g" option
```

I continued stepping through the subroutine I was in, and upon return was in the function I wished to breakpoint (ie. same level that "up" took me to previously). The "stop at" button then generated:

```
stop at "../src/gp1_prims.c":80
```

and dbx set the breakpoint.

206. Synopsis: dbx gives erroneous "not a field" error messages
Release: 3.2pilot, 3.0fcs

Description:

Dbx seems to get confused about sector_mass. It says it is "not a field of crnt_pkg_ptr->asym_ptr" when in fact it is. If the two lines from typedefs.h are directly included in test.c the problem goes away. If they are simply deleted it goes away also. They declare typedefs, but the typedefs are never used in the body of the program.

```
cc -g test.c
dbx a.out
stop in main
run
whatis crnt_pkg_ptr->asym_ptr->sector_mass
print crnt_pkg_ptr->asym_ptr->sector_mass

---------- test.c----------
#include "typedefs.h"

struct pkg
{
   struct asym *asym_ptr;
};

struct asym
{
   double sector_mass;
```

```
};

struct pkg *crnt_pkg_ptr;
main()
{
}
---------- typedefs.h ----------

typedef struct node NODE;
typedef struct asym ASYM;
```

Work around:

Get the address of sector mass and print it out form that. (ie. bypass the symbolic name for the address).

207. Synopsis: dbx/dbxtool w Fortran prog - do loop variable always is 0
Release: 3.2pilot, 3.0

Description:

When you "print" the do loop control variable using dbx or dbxtool of a Fortran program, that variable always equals zero.

208. Synopsis: dbxtool core dumps on dump command
Release: 3.2pilot

Description:

When dbxtool has just been entered, if one types "dump" at the dbxtool prompt, the following error message is generated and and dbxtool exits:

Child dbx killed by signal 11

209. Synopsis: calling ioinit as per doc. causes link error
Release: 3.2pilot, 3.0fcs

Description:

When you call ioinit as per manual page ioinit(3f). You get linker undefined errors.
Here are the errors:

Undefined:
_s_cmp
_i_len
lnblnk
_i_indx

Note: these are all routines from libF77a.

WORKAROUND:

cd to work directory.
ar x /usr/lib/libI77.a ioinit.o
now ioinit is in your current working directory
f77 *.f ioinit.o

You will no longer have these undefined errors.

210. Synopsis: the -C option can cause f77pass1 to core dump
Release: 3.2pilot, 3.0fcs

Description:

If you compile a Fortran 77 program with -C and attempt to index the unit, f77pass1 core dumps.

211. Synopsis: character strings assigned to dimensioned variables causes f77 error
Release: 3.2pilot

Description:

The following incorrectly coded sequence causes the 3.2PILOT f77 compiler to generate an error but then die with a "Compiler error".

```
      subroutine plabak
    dimension  wprt(3)
    wprt(1)  = ' del'
    wprt(2)  = 'p/pm'
    wprt(3)  = 'ax  '
    thetr    = thetar*180./pi
     return
     end
```

The error messages are:

```
f77 -O -c smalbug.f
smalbug.f:
        plabak:
    Error on line 3 of smalbug.f: impossible conversion
Compiler error line 3 of smalbug.f: Impossible tag error in routine map_fortnode
```

212. Synopsis: Indent fails to recognize more than 14 typedefs if the variable of
Release: 3.2pilot

Description:

Indent misformats certain cases of variables whose type is given by a typedef, and whose name begins with an underbar ('_'). The file .indent.pro contains appropriate '-T...' entries for the affected types.

It appears that, for this combination, all typdefs after the 14th one mentioned in .indent.pro are misformatted.

Topic: Documentation

213. Synopsis: select(2) returns EINVAL on some large time intervals
Release: 3.2gamma

Description:

Invocations of select with large values specified for a timeout (greater than x03ffffff) return EINVAL.
This error should be mentioned under Errors in the Select(2) Man Page.

214. Synopsis: f77(1) claims f77 leaves .o files by default
Release: 3.2pilot, 3.0

Description:

In the 3.2 Commands Reference Manual, p. 156 (f77(1)), it states "Filenames ending in .f are taken to be FORTRAN 77 source programs; they are compiled, and each object program is left in the file (in the current directory) whose name is that of the source with .o

substituted for .f'

However, this is untrue. Compiling does not produce a .o unless the -c option is used. The -c option is described later in the same document.

Topic: Graphics

215. Synopsis: cgipw: retained pixrect must be same size as screen pixrect
Release: 3.2pilot, 3.0

Description:

CGIPW seems to require that the retained pixrect be the same size as the screen pixrect of the pixwin of the cgi view surface. But a SunView canvas may have a backing (retained) pixrect larger than the visible screen window area. This allows scrolling around a large image with a smaller window. This mismatch prevents the use of CGIPW on a SunView canvas which has a retained area larger than the visible window (and may have scrollbars).

216. Synopsis: demos: maze core dumps on high res (sirius) b/w monitor
Release: 3.2pilot

Description:

The demo maze core dumps with a segmentation fault when run outside windows on the sirius high resolutions b/w monitor.

Work around:

Double size of global arrays in src code.

Topic: Kernel

217. Synopsis: SCSI disconnect/reconnect does not work
Release: 3.2pilot

Description:

3.2PILOT (and BETA version(s) too) fails in "setup" while loading from 1/4" tapes on Sun-3/50's (or with unreleased Sun-3

SCSI interfaces). Often while loading from the second or third tape, a tar error would be reported by setup with exit codes 2, 3, or 13. Then the system hangs.

Work around:

Disabling disconnect-reconnect operations appears to fix the problem. Therefore, proceed as follows

* Come up single user on the miniroot and before running setup, make sure you are running

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Set the "scsi_disre_enable" variable to zero in the in-memory copy of the kernel and continue by "L1-A"ing into the prom monitor and have the following dialogue. User input is in **.

```
Abort at xxxxxxxx
>*l f07ddee*
0F07DDEE: 00000001?  *0*
[verify the address and value before responding with 0]
0F07DDF2: 00000000?  *.*
>*c*
```

You should now be back at the # prompt, ready to run setup.

* To avoid future problems, you can patch every kernel as follows:

```
# adb -w /vmunix
scsi_disre_enable?W 0
[make sure you use a capital W]
_scsi_disre_enable:          0x1          =       0x0
^D
```

Don't forget to reboot the the patched kernel if you do not modify the in-memory copy.

218. Synopsis: Degenerate filename problems in lookuppn():sys/vfs_lookup.c
Release: 3.2pilot

Description:

If you attempt to write to an existing directory with a degenerate

filename ("." and "/") the system does the right thing (it won't let you) but returns an incorrect error code -- EINVAL instead of EISDIR.

Note that on 3.2Pilot, not only do the last two cases fail, but the second case, which works on 3.0FCS and returns EISDIR, now returns EPERM, which could be argued to be making things worse.

219. Synopsis: fragmented swap partition
Release: 3.2pilot

Description:

When running suntools under 3.2 pilot, the swap partition gets increasingly fragmented until programs stop running. Haven't been able to run suntools for longer than 3 days.

Topic: Network

220. Synopsis: nfs: root access across net does not check group access correctly
Release: 3.2pilot, 3.1, 3.0, 2.2

Description:

nfs does not correctly check group access for root of the nfs client if the group is NOT wheel.

If an nfs mounted file system has a directory which is:

1. only has owner and group access permissions (i.e. mode 770)
2. owner is root
3. group is NOT wheel

is writable by root on the nfs client (i.e. writable by user nobody).

If the group of this same directory is changed back to group wheel, root on the nfs client no longer has write permissions (as it should be).

221. Synopsis: ypinit does not copy user-defined yp databases to slave server
Release: 3.2pilot, 3.0

Description:

We have installed one of our own yp maps on our master server. When a new slave server was installed, "ypinit -s master_name" was done. All the system yp maps were copied over to the slave server. However, our own yp map was not.

Ypinit(8) man page states -

"A YP database on a slave server is set up by copying an existing database from a running server."

This implies that ALL maps from the server will be installed on the slave server.

Topic: Bourne Shell

222. Synopsis: exec in bourne shell gives "no stack space"
Release: 3.2pilot, 3.0

Description:

If you exec a process that doesn't exist, and then exec one that does, you will get a message that says "no space" and then one that says "no stack space". When you get out of the process, you then get error message such as "no memory" and "sorry, pid was killed due to swap problems in swapout: no swap space for U area" and " pid killed due to swap problems in xalloc: no swap for text".

Topic: System Administration

223. Synopsis: SETUP bug seen on high-res monitors for sirius (3/280)
Release: 3.2pilot

Description:

The disks screen for setup on a high-resolution monitor is not displayed correctly - the disk partition display hides the prompt text

Topic: Utilities

224. Synopsis: internal error using mailtool using textedit
Release: 3.2pilot, 3.1, 3.0

Description:

Formulate a reply to an incoming mail message by using another editor and sucking in the result with get from file. Edit the message just a bit more, then go to deliver it. You may see the following error box:

> Save failed due to INTERNAL ERROR
> ps_replace_original_esh; status =
> 0x2 (Click any button to remove
> msg.)

225. Synopsis: preview doesn't work with GPs
Release: 3.2pilot

Description:

When I try to format a document and preview it, I get this error message:

> no pixrect implemented for /dev/fb
> Can't invoke preview - are you running SunWindows?

226. Synopsis: "ps -l" and "ps -u" options have different "SZ" values
Release: 3.2pilot, 3.0, 2.0

Description:

The output for the "ps -l" and "ps -u" options both have an item SZ, the values differ but should not.

227. Synopsis: spell can't find words in its dictionary
Release: 3.2pilot

Description:

There are words in /usr/dict/words, the source dictionary for spell, which spell reports as misspellings.

228. Synopsis: lpc requires uid as well as effective uid to be 0
Release: 3.2pilot

Description:

The lpc program requires that the uid as well as the effective uid be root in order to utilize some features of the software.

This hampers setuid software which must now go to the extra trouble of calling the setuid() library call.

229. Synopsis: Catman problems.
Release: 3.2pilot

Description:

These error messages showed up while running catman

opendir: mann: No such file or directory
.: No such file or directory

230. Synopsis: ctags confused by struct tags
Release: 3.2pilot, 3.0

Description:

Running "ctags -t" on source with structure "tags" after the word struct (or union tags) keeps those structures out of the tags file. For example:

```
typedef struct ws_set_tag {
    short       num_ws;
    int             list[10];
    } ws_set_ignored;
```

will not be included, but the following will be:

```
typedef struct {
    short       num_ws;
    int             list[10];
    } ws_set;
```

Topic: Compiler -- 3.2beta

231. Synopsis: 3.2Beta DBX Core dumps with large files.
Release: 3.2beta

Description:
When using DBX with a large file (38000 lines), DBX will core dump.

232. Synopsis: dbx dumps core if file not compiled with -g flag
Release: 3.2beta3

Description:
dbx dies with a segmentation violation and a core dump if you try to enter dbx with a file that hasn't been compiled with -g

Topic: Utility

233. Synopsis: Vi invoked from makefile aborts on ctrl/c
Release: 3.2beta

Description:
If vi is invoked from inside a makefile and ctrl/c is typed (inside vi), it will abort right away leaving the screen in vi-mode (cbreak and all that).

234. Synopsis: mailtool gets confused about [NEW MAIL]
Release: 3.2beta3

Description:
Mailtool sometimes thinks that there is new mail right after you click the [new mail] button if an implicit [commit] was done. For example, if you click [new mail] to check for newly arrived mail just before clicking [done]...the tool goes iconic, then immediately raises the flag and you reopen it to discover that there isn't any new mail after all.

235. Synopsis: pg always uses default window size
Release: 3.2beta3

Description:
"/usr/5bin/pg" does not fill a larger than default window and overfills a smaller than default window.

Topic: Compiler

236. Synopsis: "getwd()" library routine
Release: 3.0

Description:
The getwd() routine in the standard C library uses "stat()" rather than "lstat()" to search for the component segment names in the path to the current working directory. Most of the time, due to the normal order of file creation in a directory, getwd() finds the real directory entry first. But on occasion it will find a symbolic link to the directory, and by using "stat()" rather than "lstat()" will decide to report the symbolic link as the "correct" pathname component.

In addition to causing even more randomness in the result of a getwd() call, this usage interacts badly with symbolic links to NFS mount points when a particular NFS server is not responding.

237. Synopsis: ctime() does not know about DST in Europe for 1986
Release: 3.0

238. Synopsis: compiler, ccom bug
Release: 3.0

Description:
1 - cc {program name over 100 chars}.c
ccom dumps core (segmentation fault)

The offending code is given below. One should use a:

#define of MAX_NAME_LENGTH 1024
or something similar to specify the length of the string. The use of:
char filename[100] = ""; /* the name of the file */
is incorrect.

```
*> #ifndef lint
*> static  char sccsid[] = "@(#)reader.c 1.1 86/02/03 SMI";
*> #endif
*>
*> # include "cpass2.h"
*>
*> /*      some storage declarations */
*>
*> # ifndef ONEPASS

**********> char filename[100] = "";  /* the name of the file */

*> int ftnno;  /* number of current function */
*> int lineno;
*> # else
*> # define NOMAIN
*> #endif
*>
*> /*
*>  * These are for machines with multiple register sets, for which su is
*>  * "more than just a number". They may be defined in machdep2.h.
```

Known patches:

Get rid of the magic number in the declaration of "filename".
Use something reasonable line MAX_NAME_LEN that relates to the maximum possible name lenth on a bsd/sun system.

239. Synopsis: compiler generates error with -f68881 flag
Release: 3.0

Description:

The compiler generates the message

compiler error: no table entry for op =

when the program below is compiled with the -f68881 flag. This doesn't happen when the -fsoft option is used (the correct code is generated).

240. Synopsis: dbx prints incorrect value for odd char arrays in structures
Release: 3.0

Description:

dbx prints that the value of c1 is ' ', rather than "abcde" at line 11 (the last line) for the following program.

```
struct {
        char c1[5];
} s;
main()
{
        s.c1[0] = 'a';
        s.c1[1] = 'b';
        s.c1[2] = 'c';
        s.c1[3] = 'd';
        s.c1[4] = 'e';
}
```

241. Synopsis: In dbx in routine eval.c will panic on a popsmall
Release: 3.0

Description:

In eval.c for dbx if a popsmall is a condidition it will panic and exit dbx. This however, is a condition that is legal and can happen.

242. Synopsis: dbx: 'print ptr^.field' fails for pascal pgm with record ptrs
Release: 3.0

Description:

When debugging a pascal program with dbx or dbxtool, the dbx command 'print ptr^.field' does not work. But ptr^.field is legal pascal, and should be the accepted mechanism for referencing a field in a record pointed at by ptr.

dbx just prints the message "syntax error".

243. Synopsis: dbxtool masks ioctl calls
Release: 3.0

Description:

The problem occurs in code that does ioctl calls to suppress echo and turn off buffering. The program asks you to type in a string. It then echoes back each character inside parentheses to prove that the program and no one else is doing the echoes. When you type <cr> it echoes the <cr> in parentheses. Then says "here is the string" and echoes the entire string.
Under csh and dbx this works just fine. Under dbxtool it does not. It echoes the characters right away.
else.

244. Synopsis: fortran f68881 option and complex numbers causes "op REG" failure
Release: 3.0

245. Synopsis: err in initializing char strings in data stmts to non-printing ascii chars
Release: 3.0

Description:

The program below should cause the screen to flash, but it does not.

```
 character *1 ch,bel
parameter (ch=char(007))
data bel/ch/
write (*,*)bel
stop
end
```

246. Synopsis: Fortran in uppercase and DBXTOOL incompatible
Release: 3.0

Description:

FORTRAN standard is uppercase letters. The compiler accepts the uppercase and by default converts to lowercase. Compilation is clean and all seems well until you use DBX or DBXTOOL. Neither of the debuggers recognizes the uppercase variables (when pointed

at) but they may be displayed (etc.) by hand typing them in lower case. DBXTOOL is no longer a graphics debugger but becomes equivalent to DBX+.

If the -U switch is used, compiler keywords such as "OPEN" are no longer recognized.

Work around:

use UNIX "tr" command on all source before compiling.

247. Synopsis: Fortran complier complains about dbx basetype.
Release: 3.0

Description:

```
subroutine dumarg(proc)

C       When this routine is compiled with "f77 -g name.f", the
C       compiler complains it cannot get dbx basetype information
C       for proc.  The trouble disappears if the implicit
C       statement is removed or "-g" is not used.

C       I can circumvent it by adding an "integer proc" statement,
C       but FORTRAN subroutine names should not have types.
      implicit undefined (A-Z)
      external proc
      call proc
      end
```

248. Synopsis: lint misses structure mismatches.
Release: 3.0

Description:

Running lint on a program which passes a structure to a routine which expects a different structure of the same size does not generate a diagnostic. This contradicts the Type Checking section of "C Language Tools" chapter of the Programming Utilities Manual:

> ... all actual arguments must agree in type with their declared counterparts.

249. Synopsis: loader error in 68020 3.0
Release: 3.0

Description:

I have had a number of occasions when an executable has generated spuriousOF segmentation violations (e.g. in start()). The problem seems to go away when the -n flag is passed to l

Topic: Documentation

250. Synopsis: NFS sever port checking cannot be turned on on
Release: 3.0

Description:

On page 33 of the System Adminstration Manual (3.0) talks about turning on the "NFS server port checking" for added security. The instructions will give a "no symbol found" error message:

STEP 1

```
#adb -w /vmunix
nfs_portmon?W1
_nfs_portmon: 0x0       =       0x1
```

STEP 2

```
#adb -w /usr/etc/rpc.mountd
nfs_portmon?W1
no symbol found
```

Rpc.mountd has been stripped.

251. Synopsis: sys admin manual examples is not current
Release: 3.0

Description:

In the System Administration Manual for the Sun Workstation (revision B of 17th February 1986) chapter 5, page 146-147, there is an example given for /etc/gettytab. The example given bears no resemblance to the actual /etc/gettytab on a Sun machine.

Known patches:

Change example /etc/ttys file excerpt to:

12console
12ttya
02ttyb
12ttys0
1fttys1

Change example /etc/gettytab file p excerpt to:

```
f|std.1200|1200-baud:          :fd#1:sp#1200:
6|std.2400|2400-baud:          :sp#2400:ht:
7|std.4800|4800-baud:          :sp#4800:ht:
2|std.9600|9600-baud:          :sp#9600:
```

Change the commentary following the example /etc/gettytab from:

"... a '4' to 1200."

to:

"... a 'f' to 1200."

252. Synopsis: 'Setting Up A Gateway Machine' omits adding new /etc/host entry.
Release: 3.0, 2.0

Description:

3.0 System Administration manual, Communication chapter, pgs. 106 and 107. This section discusses setting up a gateway machine, but has omitted one important step.

After adding the new hosts entry to /etc/hosts on the Yellow Pages master server and running 'make hosts', there needs to be an additional step. The gateway machine must also have the new hosts entry in its own /etc/hosts file. The reason for this step is the same as why the client must have its own hosts entry in its own /etc/hosts file, i.e., the /etc/ifconfig command(s) get run from /etc/rc.boot before YP starts and require this information.

Known patches:

Add in a step between 3 and 4 on page 107 that has something to the effect:

On the gateway machine, edit /etc/hosts and add the the same hosts entry as you did on the Yellow Pages master server's /etc/hosts. The resulting /etc/hosts file on the gateway should now contain both

Internet addresses and host names for this gateway machine, i.e.,

192.9.200.1 jekyll loghost
192.9.201.4 jekyll-hyde

in the example.

253. Synopsis: 19 field L.sys line limit not documented
Release: 3.0

Description:
There is a 19 field limit on L.sys lines that is not documented.

254. Synopsis: Tapeless Install instructions unclear on /tftpboot names
Release: 3.0

Description:
1. Rev. C Installing Unix on a Tapeless Workstation says

'Now the link must be created. The name of the link is the target machine's Internet address converted to hexadecimal and using all capital letters.'

Just as importantly, each section of the address must be converted to a 2 hexadecimal digit number. In the example given, 192.9.200.100 is converted to c0 9 c8 64, but it is never explicitly stated that the 9 should be 09. The customer converted 192.9.200.7 to C09C87 instead of C009C807, and this did not work.

2. The procedure given will not work at all for class A and B host addresses. The additional example is needed for the sake of explanation: if the Internet number of a machine is 8.508, then the 8 is the first byte of the Internet address and 508 is the last 3.

255. Synopsis: getpwent(3) does not mention yellow pages
Release: 3.0

Description:

The manual entry for getpwent(3) makes no mention of the fact that it does look up entries in the yp database, interpreting the "+" automatically.

Topic: Graphics

256. Synopsis: append_text() calculates the wrong (x,y) coordinates.
Release: 3.0, 2.2

Description:

The routine append_text() is suppost to print text after the end of the most recently written text... But, the calculations are off in the -y direction.

257. Synopsis: cgi: cgipw does not respect pixwin regions
Release: 3.0

Description:

CGIPW does not respect pixwin regions.

The size (rect) of the pixwin is determined by calling win_getsize() on the pixwin window fd, rather than using pw_getregionrect(), or using any size info actually in the pixwin struct itself.

The SunView canvas window deals with region pixwins. The pixwin handle which is made available is usually a pixwin region of the full pixwin of the canvas window. Since scrollbars are implemented as pixwin regions, it is mandatory that these region areas be preserved.

This mismatch between CGIPW and SunView canvas use of pixwin regions prevents the integration of CGIPW on a SunView canvas which has scrollbars.

258. Synopsis: Re: Color map is not reloaded when entered from other screen
Release: 3.0

Description:
Color map is not reloaded when entered from other screen.
Work around:
Popping up a menu (anywhere) and bringing it down without invoking anything will reload the right colormap.

259. Synopsis: problem with pixrect transparent text
Release: 3.0

Description:
pf_ttext() cannot handle strings longer than 80 chars correcly.

Topic: Kernel

260. Synopsis: Re: MT-02 vs. Sysgen Compatibility
Release: 3.0

Description:
cannot append files using mt-02 using fsf

261. Synopsis: After remote /etc/shutdown, console is still in "raw" mode.
Release: 3.0, 2.0

262. Synopsis: NFS not enough user protection on /etc/mount.
Release: 3.0

Description:
If one tries to mount an NFS directory on the system which it is exported from, it will hang the system so it must be rebooted.

263. Synopsis: system call doesn't return error code
Release: 3.0

Description:

If someone sets the rlim_max to be less than the current limit the system call setrlimit doesn't return the error code EPERM.

264. Synopsis: TCP/IP Problems with Sun:round trip time computation
Release: 3.0

Description:

1. The round trip timing code is broken. If several transmissions are made of a given segment before an ack arrives, the TCP computes the round trip time between the LAST transmission and the ACK, even if the ACK was in response to an earlier transmission. This is no problem as long as the estimated round trip time isn't too short.

265. Synopsis: TCP/IP Problems with Sun:1/2 s. round trip too small for slow link
Release: 3.0

Description:

The initial round trip time estimate is 1/2 second. This is acceptable on an Ethernet, but nowhere else. Combined with #1, this often causes TCP to go into a metastable state where everything gets retransmitted several times, even though no packets are getting lost. This only happens on a slow link.

266. Synopsis: TCP/IP Problems with Sun:doesn't have Nagle tinygram-avoidance
Release: 3.0

Description:

The Sun TCP lacks the Nagle tinygram-avoidance algorithm. This rule, described in RFC-896, specifies that TCP should delay sending new data unless there is already a maximum-sized packet "in the pipe". This has the effect of combining lots of small (i.e., single character) writes into fewer but larger packets. More than one packet is unacknowledged only when the throughput requirements justify it.

267. Synopsis: user program panics the system
Release: 3.0

Description:

A user program with "user errors" causes the system to panic (Bus Error).

Topic: Network

268. Synopsis: NFS bug
Release: 3.0

Description:

> We start with an a.out file which is generally stored on our main Sun
> system (named, Edsel), and when we run it, it will increase its memory
> usage substantially as it loads in other compiled lisp files. With
> exactly the same configuration of files, data, and so forth, we will
> experience problems with this "run" on the satellite machines, and other
> machines linked to Edsel by NFS, which we have never (note: never)
> experienced on Edsel. But if we have a local disk on one of the other
> systems, and copy the a.out file to the local disk before running it,
> then there are no problems with that "run".
>
> The "problems" in question are a random resetting of bits in some words.
> There are some dozens of addresses which we allege that Lisp can't be
> updating -- they start out zero in the a.out image, our code never tries
> to write in such locations, and in fact careful monitoring during a
> "run" on Edsel shows that they never do change from zero [they are "slop"
> words left over after rounding up a memory allocation request to the
> discretization size, which is currently 8 bytes]. But during a "run" on
> a remote system, in which the a.out file is fetched over NFS, some of
> these words *** most probably *** will change into random bit patterns,
> and the change will be observable, typically at the onset of paging
> behaviour (swapping in or out), or of sub-job forking.
>
> The "problems" are not limited to the introduction of random 1 bits
> into these formerly zero words; ocasionally, we can detect random bit
> pattern changes in other words. But it is much easier to prove that
> Lisp itself isn't changing the "slop" words, and to detect an unexpected
> value appearing in them during a "run".

269. Synopsis: yppasswd responds with "couldn't change passwd"
Release: 3.0, 3.0pilot, 3.0fcs

Description:

Using yppasswd to change the password in the yp database fails when the ascii file is not /etc/passwd, although /usr/etc/rpc.yppasswdd is set up correctly.

If you use /etc/passwd as the ascii file, it succeeds (but yppush core dumps).

270. Synopsis: Rlogin and username length
Release: 3.0

Description:

There seems to be several different ideas of the maximum username length incorporated in related utilities such as "rlogin" (or "rlogind"), "su", "login", etc.

It appears that rlogin/rlogind's idea is incorrect, although it could be one of the other utlities that is wrong. In any case, they should all be using the same parameters for maximum username length.

271. Synopsis: yppasswd fails on lexically similar logins
Release: 3.0

Description:

Given a situation wherein a two users have identical logins except that one login is longer than the other, if the longer login is above the shorter in the yp password file, the shorter one is not found by yppasswd and thus, the yellow pages password cannot be changed.

272. Synopsis: PC NFS
Release: 3.0

Description:

Telnet does not correctly reset the DOS cursor when you exit with it resident. The on-line manual page for the socket(2) system call omits the fact The cursor may not be on the baseline.

Also setenv TERM vt100 on p. 105 is insufficient (e.g., vi won't work). I use: alias bea 'set noglob;eval 'tset -s -Q *'' in my .login so I can say: bea vt100

Topic: sunview1

273. Synopsis: Menus of certain height get "menu_show: Menu too large for screen."
Release: 3.0

Description:

When using walking menus under 3.0 and up, if you add a walking menu item which is just large enough to consume the entire height of the screen and then you add one more item, you will get the error "menu_show: Menu too large for screen." This is because the calculation to start another column does not take into account that the remaining height can be a fraction of one menu item.

274. Synopsis: sunview: tty window: cannot set the WINDOW_GFX environment variable
Release: 3.0

Description:

I know of no way to set the WINDOW_GFX environment variable of the tty process started in a tty window.

This is because the creation of the window, and the process forked in it all done in the window_create() call. The WINDOW_GFX variable is explicitly set in the library code to use the window number of the tty window.

This effectively precludes converting gfxtool.c to real sunview code.

While sunview code does not use WINDOW_GFX, it is still heavily used by demos, graphics library code (core,cgi,etc), and by gfxsw_init().

275. Synopsis: textedit can't save files to read-only directory.
Release: 3.0

Description:

If you are editing a file for which you have write permission, but you don't have write permissions in the directory, the "store" or "save" fails because it can't write the backup file.

276. Synopsis: Wrong window size.
Release: 3.0

Description:

Physical window size does not match what the software of "vi" and "more" think it is. This has occurred on both pty's and the console For pty's it happens both for cshtool and rlogin's. Once it starts happening on a tty it seems to continue happening on that tty for awhile even across login's. Eventually it stops on a new login.
Our environment is a 3/180 serving 5 diskless 3/75, all running generic SUN3.

Topic: System Administration

277. Synopsis: setup deals incorrectly with multi-disk situation
Release: 3.0

Description:

When setup is run from a SCSI disk's swap space on a system that also has an SMD disk, it does not grasp the fact and will let you inadvertently destroy the partition you are running it from.
This limitation is not documented anywhere.

278. Synopsis: setup rearranges disk partitions if a hole is present
Release: 3.0, 3.1

Description:

If a disk other than xy0 has a hole in it, that is "a,b,space,d,e", then setup rearranges things to look like "a,b,d,e,space" without a user request.

279. Synopsis: MAKEDEV sfX
Release: 3.0

Description:

1) MAKEDEV sfX does a mknod with the wrong minor device numbers.
2) MAKEDEV sfX should also do a mknod for "sfpcX" devices.

The devices that should be created with a "MAKEDEV sf0" command are:

```
mknod sf0 b 9 0          # this is correct in MAKEDEV now
mknod sfpc0 c 33 0  # this was named "rsf" in old MAKEDEV
mknod rsf0 c 33 4    # this was 33 0 in old MAKEDEV
```

280. Synopsis: stand/copy: uses the wrong pub partition (sometimes)
Release: 3.0

Description:

stand/copy does not handle multiple pub partitions correctly (one pub for each architecture). It seems only to use pub0 (/pub.MC68010 on the server I tried).

For example, I tried to install a tapeless system using a server which serves both architectures. I followed the directions in the installing docs and put the minifs into /pub.MC68020. Then I booted stand/copy from the server (from /pub.MC68010).

stand/copy booted ok, but when I specified that it copy minifs from the pub partition, I got the error message "minifs not found".

This effectively prohibited installing until I realized that stand/copy was looking in /pub.MC68010

NOT /pub.MC68020.

This is incorrect. There are 2 pub (and 2 stand/copy's) for a reason. There must also be 2 minifs's. If nothing else, the documentation does not cover this at all.

Topic: Utilities

281. Synopsis: A small mail message sent to a long alias fails
Release: 3.0

Description:

When a small mail message (8 or fewer characters) is sent to a long alias (11 or more recipients), the mailer responds with

No message body

and dies. The problem goes away if you increase the size of the message or decrease the number of recipients in the alias.

282. Synopsis: Mail locking problem
Release: 3.0

Description:

/usr/ucb/Mail needs to create /usr/spool/mail/username.lock in order to lock the /usr/spool/mail/username file properly when it needs to write it.

To create that lock file, one must be able to write to the directory /usr/spool/mail/.

We can not make /usr/spool/mail/ mode 777 (world writable) because then anybody would be able to delete and replace anybody else's mail. We want to keep it mode 755.

We can not make /usr/ucb/Mail/ setuid root because of obvious security risks.

283. Synopsis: Problem with lprm
Release: 3.0

Description:
"lprm" will not remove a queued file if you use hostnames that use domains.

284. Synopsis: INDXBIB causes memory fault message and dumps core.
Release: 3.0, 3.0pilot

Description:
INDXBIB causes memory fault message and dumps core. /usr/lib/refer/inv which is called by the indxbib shell script is the component which produces the memory fault message.

285. Synopsis: ypwhich: 2.x yp client - 'ypwhich -m' fails to 3.0 yp server
Release: 3.0, 2.x

Description:
ypwhich -m fails on a 2.x yp client which is bound to a 3.0 yp server.

The versions of YP should be compatible enough so that 2.x clients could bind and use a 3.0 yp server. This is a failure of this compatibility.

286. Synopsis: indxbib dumps core
Release: 3.0, 2.0

Description:
indxbib(1) which make an inverted index to a bibliography core dumps.

287. Synopsis: uucp and uux allow only 19 fields on an L.sys line
Release: 3.0

Description:

uucp and uux allow only 19 fields on an L.sys line. If there are more fields, uucp and uux will fail randomly, but most likely report "bad system name". Very complicated logins will confuse them.

The problem is found in versys.c, where getargs is used to fill in a 20 word array of character pointers.

Topic: Compiler

288. Synopsis: cc -a and nested switch statements causes error
Release: 3.0fcs

Description:

cc -a file.c gives the error "line 11: warning: statement not reached"
cc file.c is okay.

```
main()
{
        int i, j;
        switch ( i )
           {
              default:
                 switch ( j )
                    {
                          default:
                          return;
                    }
              break;
           }
}
```

The problem goes away if the label in the inner switch is not the special label default or if the statement in the default label is not the return statement.

289. Synopsis: Dbxtool exits (child dbx killed by signal 9)
Release: 3.0fcs

Description:
Dbxtool exits, saying "child dbx killed by signal 9".

290. Synopsis: dbx's setenv command does not work
Release: 3.0fcs

Description:
Dbx's setenv command does *not* set the environment of the running program. This is nearly necessary for debugging curses(3x)-using programs with dbxtool, where the TERMCAP variable must reflect the destination window, rather than the dbxtool's command window.

291. Synopsis: Fortran includes and cpp causing f77pass1 to core dump
Release: 3.0fcs, 2.0

Description:
The file below must be named fills.F. No other name for the file seems to produce this error. Compile it with "f77 fills.F" and f77pass1 gets a "Termination code 139". This is the standard core dump and die. Changing any of the lines or the name of the file causes fortran to act correctly.

Topic: Documentation-- 3.0fcs

292. Synopsis: dbx's "setenv" command is not documented
Release: 3.0fcs

Description:
Dbx's "setenv" is not documented. It appears on dbx's help message, but does not appear in the manual.

293. Synopsis: dump(8) does not support multi-file multi-volume tapes
Release: 3.0fcs

Description:

It is not documented that
dump does not support multi-file multi-volume tapes. Dump will not report an error. A user will go on thinking all is well until he attempts a restore. This should be documented in either in either System Administration or Commands.

294. Synopsis: yp passwd file procedures not described in admin book
Release: 3.0fcs

Description:

The common practice of using a yp password file distinct from /etc/passwd is not described in the Systems Administration manual.

295. Synopsis: errors in sample printcap section of adding hardware chapter
Release: 3.0fcs

Description:

The 3.0 System Administration manual, pg 160 and 161 discuss a sample printcap entry, but contains a few errors.

Pg. 160: The sample printcap itself. The presense of both the fs/fc values and the xs are counter productive. The xs#040 sets LLITOUT, which disables all output processing. This undoes what is attempted by the fs#06020 and fc#0300, which tries to set XTABS, CRMOD, and space parity, but is overridden by the LLITOUT feature.

To correct this sample, remove the 'xs#040' field from the sample printcap. The 'xs' description should be moved to a separate area with a description of how it is used, interacts with the fs/fc fields, and what the effect will be.

Pg. 161: Top of the page. The 'Clear flag bits' printcap capability is named 'fc' not 'fs'.

Test sample printcap and you will not see the tab expansion nor the CR/LF translations as anticipated.

Work around:

Do not mix both LLITOUT with these fs/fc capabilities. These are mutually exclusive capabilities.

296. Synopsis: adding a YP slave server documentation not unclear
Release: 3.0fcs

Description:

Running with Generic Sun3/160C, 4MB, SCSI disk and tape, several NFS file systems mounted, the system completely locked up when a "tar tvbf 126 /dev/rst0" was run. Attempts to interrupt tar failed: tape never moved; "ping" from another system succeeded, but rlogin timed out. Finally, "setup-A" followed by "g0" commands were given to force panic and core dump.

Topic: kernel

297. Synopsis: user pgm causes rlogin to die
Release: 3.0fcs

Description:

When this socket program is run, and the rlogin process from one of the windows is allowed to get swapped out, then you can get "connection closed" when the rlogin gets swapped back in.

298. Synopsis: Setup failed to properly install a yellow pages slave server
Release: 3.0fcs

Description:

lpr -f, a documented feature of lpr, does not work with the LaserWriter, since the LaserWriter software does not support it.

Topic: Compiler

299. Synopsis: 3.0Pilot 68020 cc -O bug
Release: 3.0pilot

Description:

A bug in the optimizer was found. Symptoms of the bug are that the customer's program, when compiled with and without the -O option, will yield different results.

300. Synopsis: f77 compiler thrashes
Release: 3.0pilot

Description:

A 1500 line F77 program seems to cause the f77 compiler to start thrashing when the -C (Check subscripting) flag is used. The machine where this was seen was a Sun3-4 with 2x71MB SCSI disks. THe problem shows up with the machine quickly grinding to a virtual standstill with the only detectable activity being a large amount of paging going on. If left to its own devices, the program which normally compiles in about 3 minutes will eventually compile, but only after what is a very long time. I am submitting this report with somewhat sketchy information since the 1500 line compile I am using as an example has been running for over an hour on this Sun3.

Topic: Sunview1

301. Synopsis: suntools selection service broken on standalones without ethernet
Release: 3.0 pilot, 3.0beta2

Description:

1. If you ifconfig ie, le, ec, or lo, down or up, but do not physically have ethernet connected, you can't correctly start suntools. The error message is "cannot initiate contact with selection service. address family not supported by protocol family." The root window and other windows come up, but with major amounts of complaints. Perfmeter does not work, either, but presents you with a "?".

2. If you do not ifconfig ie, le, ec, or lo at ALL (not down or up, but

not at all), suntools comes up with no complaints. Perfmeter still does not work.

3. If you did (2) above, and are in suntools, then ifconfig lo0 up, perfmeter still does not work. If, however, you ifconfig ie0 up, perfmeter works fine. But, you're forced to look at a zillion ie0:no carrier messages.

302. Synopsis: shelltool and sh interrupt problem
Release: 3.0pilot

Description:

Given the following command from the Bourne shell, the shell will make the "shelltool" ignore the SIGINT and SIGQUIT signals:

```
shelltool&
```

The problem is that the Bourne shell passes this characteristic on to its children, including the shell that runs under it and all commands run from that shell.

The reason why the Bourne shell does this is so that the command in question won't get disturbed by the user hitting their interrupt or quit keys to interrupt foreground jobs (background jobs should, indeed, not be disturbed by these signals). However, a "shelltool" detaches itself from the terminal it was run from, and attaches itself to the pseudo-tty it uses, so once it's done that it will no longer see signals from the original terminal and doesn't need to ignore them. (The same is true of any other program which uses tty text - subwindows.)

This is not seen with the C shell because the C shell doesn't ignore interrupts in background processes; it doesn't have to, since it puts background processes into a different process group from the one the terminal is in.

303. Synopsis: Cannot use "cat" when rlogin'd from cmdtool
Release: 3.0pilot

304. Synopsis: more & cmdtool
Release: 3.0pilot

Description:
Can't browse using more in cmdtool. Forced to use an editor or shelltool.
Known patches:
Use cmdtool instead of shelltool for such applications.

305. Synopsis: cmdtool and size changes
Release: 3.0pilot

Description:
Changing the size of the cmdtool does not change the termcap entry.
Known patches:
Use cmdtool instead of shelltool for such applications.

Topic: System Administration

306. Synopsis: 3.0 remote install hangs at execute-setup
Release: 3.0pilot

Description:
The remote install procedure in Unix Installation Manual, Appendix B does not work for installing the Carrera machine from a Sun2 3.0pilot heterogenous server. It was possible to remotely load the minifs, but it hangs at execute-setup. It does not do the disk labeling. Nothing is displayed in the Message subwindow. This is a bug report for both setup utility and documentation.

307. Synopsis: Setup doesn't notify that it couldn't load tape
Release: 3.0pilot

Description:

Setup did not give an error message to show that loading of one of the tapes was not successful.
Customer ran setup. When setup read the second tape with /usr on it, it gave the message that tape exited with status 1 please insert tape 3. It didn't inform him that none of /usr was extracted. He finished up the other two tapes and when he booted single user he found out that the /usr extract was unsuccessful.

308. Synopsis: setup: client fstab files mount /usr read-only - incorrect
Release: 3.0pilot

Description:

The /etc/fstab that setup creates for a diskless client incorrectly mounts its /usr.{MC68010,MC68020} partition from the server as read-only. However, the /usr partition should be mounted from the server as read-write.

Several programs rely on the ability to write into /usr or they will fail. Two examples are "gammontool" and "hack". "hack" tries to access /usr/games/lib/hackdir, and "gammontool" tries to access /usr/games/lib/gammonscores. As a result of /usr being mounted read-only, "hack" will not run on diskless clients, and "gammontool" will report errors several times during a session.

Topic: Utilities

309. Synopsis: curses doesn't write to highlighted fields in windows properly
Release: 3.0pilot,2.0

Description:

When curses writes to a highlighted field running in a tty subwindow, it sometimes doesn't update it properly. It works fine if you run outside SunWindows or through a rlogin.

"canfield" exhibits a similar problem: if you toggle card counting and play 2 or more games in a row, black cards are

eventually incorrectly highlighted in the foundation and the card count.

310. Synopsis: "sccs deledit *.c" followed by "make" doesn't work
Release: 3.0beta2

Description:

Sccs deledit does not change the dates on the files because it knows that check-in followed by check-out doesn't change the source files.

System-V 'make' knows about SCCS and wants to check out files if the SCCS version is newer (file mod-date) than the source in the directory.

Sccs won't let you check out a file already checked out for editing.

Topic: System Administration -- 3.0beta

311. Synopsis: setup can't read label from CDC disk
Release: 3.0beta

Description:

With the following two disks:

1. /dev/xy0: Eagle disk
2. /dev/xy1: CDC disk (800M)

When customer invokes excut-setup, they get:

Can't read label on /dev/xy1c

They run diag to read the label on the CDC disk. All labels look fine except partition c is some huge overfloated number.

312. Synopsis: Mail configuration in setup makes no difference
Release: 3.0beta

Description:

Setting up system and you designate mail server or client. When setup is done there is no difference in mail setup

313. Synopsis: setup: does not install sendmail.cf on diskless clients
Release: 3.0beta2

Description:

Setup for a server serving diskless clients does not install the mail system for the diskless clients, even though it installs the mail system on the server.

On the server, setup copies either /usr/lib/{sendmail.main.cf,sendmail.subsidiary.cf} to /private/usr/lib/sendmail.cf (pointed to by the link /usr/lib/sendmail.cf), depending on whether the system is setup as a main mail machine or not.

No such copy is done for any of the diskless clients.

This results in /usr/lib/sendmail.cf being a link to nothing. sendmail will not be started up in /etc/rc.local without this file.

Topic: Sunview1

314. Synopsis: cd in mailtool -- shell character expansion
Release: 3.0beta2

Description:

The cd option in mailtool will accept a shell meta character, but if it fails, it doesn't give an error message as the regular shell does:
e.g. mabstoa$ cd /usr/vfree/lsk/qa/tsting/3.0/unb*
/usr/vfree/lsk/qa/tsting/3.0/unb*: No match.

Release 2.0 and prior releases

Topic: Compiler

315. Synopsis: Line "X = ." causes assembler to bomb
Release: 2.0

Description:
Customer encounters difficulties when trying to assemble the following form:

symbolname = .

316. Synopsis: i *=z truncates float before operation
Release: 2.0

Description:
The line of code:
i *=z
with i being an integer (2), and z being a float (.9), produces an answer of 0, rather than 1. It appears to be truncating z before the arithmetic operation.

317. Synopsis: C Compiler gives incorrect syntax error with -a option
Release: 2.0

Description:
Parenthetical expression in a for loop gives a syntax error when compiled with the -a option for tcov(1) but does not give a syntax error when compiled without the -a option.

318. Synopsis: 'cc -a' causes errors
Release: 2.0

Description:
'cc -a' causes cc to report errors in good programs. Experimentation reveals that it has problems when something is declared with a 'void'

type above a static initialization which includes curly braces.
For example:

```
void printf();
char a[] = { "Hello, world0 };
main()
{
        printf( a );
}
```

will not compile correctly. It will compile and run correctly if:
- the printf declaration is placed below the initialization,
- the curly braces are taken off the initialization, or
- any type but 'void' is used.

Examination of the output of bb_count shows that void is not considered as a type-specifier. Examination of the output of strings /usr/lib/bb_count shows that void is not present among the other valid type-specifiers.

319. Synopsis: call does not always work in dbx
Release: 2.0

Description:

The way dbx deals with the 'call' command was apparently changed between Release 2.0 and Release 1.4.
In Release 1.4, a function may be called using the 'call' command even after the program run had been interrupted (either a ^C or segmentation violation, etc).
In Release 2.0, this no longer works, and the documentation does not apply any limit to the use the 'call'.
For example, if a program has a routine which dies with a segmentation violation, the execution of that program under dbx is interrupted and the user is returned to the dbx command prompt.

Under 1.4, the user could then have called a routine with

```
(dbx) call routine()
```

Under 2.0 the user who tries this gets an error msg

```
(dbx) call routine()
program is not active
```

320. Synopsis: dbx gives error after multiple call commands
Release: 2.0

Description:
Given the sample program below:
execution of the command "call foo(s1)" multiple times (somewhere between 25 and 30) at line 19 causes, eventually, the message "couldn't read t.c"

```
struct s {
        int a,b,c;
        float f;
        double d;
        int array[7];
        char c2;
        char carray[7];
} s1;
foo(s)
struct s s;
{

}
main()
{
        foo(s1);
        inet_makeaddr();
}
```

321. Synopsis: FORTRAN rounding error in formatted output.
Release: 2.0

Description:
FORTRAN rounding error in real formatted output, using the "F" conversion mode.

322. Synopsis: f77 put a temporary file into /tmp
Release: 2.0

Description:
The fortran compiler places a temporary file into /tmp. It is documented to place this temporary file into the working

directory. For large programs, this could be a problem, because the root file system is normally not large enough to handle large tmp files.

323. Synopsis: srandom missing from f77 libraries
Release: 2.1, 2.0

Description:
Using srandom(3) in a f77 pgm results in an undefined routine at compile time.

Topic: Documentation

324. Synopsis: documentation errors about yellow pages
Release: 2.0

Description:
In the manual "Networking on the Sun Workstation" in the chapter "Network Services" in section 2.3 there is the following error. In the paragraph on YP it states that a YP server may be neither ND server nor NFS server. This is not true. A YP server may also be a NFS or a ND server or both without any trouble at all.

It also states, in the same paragraph, that "processes on master YP server machines don't use YP services at all, and aren't YP clients', this is also false. If /etc/ypbind is running on the master server then it is using the YP and is a YP client. The default is to have /etc/ypbing running on the master server.

In section 3.2.4 "Changing your passwd" it states that ypwhich tells you where the master server is. This is false. Ypwhich(8) tells you who is you server at that moment, but this could be a slave server.

325. Synopsis: details of using cgpixwindd from f77 suncore missing.
Release: 2.0

Description:

SunCore manual does not adequately explain the FORTRAN interface to the vwsurf struct. In particular, when using cgpixwindd, the cmapsize element of the vwsurf struct must be set if it needs to be other than the default of 2.

The resulting application runs fine on raw color surfaces, but appears much like a black and white application when run in a window.

Documentation does not show the f77 equivalents of the C vwsurf struct.

326. Synopsis: misleading info on restore in 2.0 Sys Admin manual, section 3.4.2
Release: 2.0

Description:

2.0 System Administration Manual, chapter 3 - Disk and File Systems, section 3.4.2 - Restoring An Entire File System, step 4.

This section does not indicate that 'restores' must be done with the same blocking factor as when 'dumped.' This is particularly important when making multi-tape dumps to 1/4-inch tape. The Sys Admin manual always indicates use of 126-blocking factor on dumps, but never mentions specifying the same blocking factor during restores.

Restoring a multi-tape, 1/4-inch dump tape created with a 126-blocking factor, the following error message displays at the end of a tape:

partial block read: <num> should be <num>

The contents of this partial-block read is not copied onto disk.

327. Synopsis: ACUHAYES omitted from supported-device types for UUCP documentation.
Release: 2.0

Description:

ACUHAYES omitted from supported-device types for UUCP in 'System Administration for the Sun Workstation,' 'Tutorials' index tab, 'UUCP Implementation Description' chapter, section '9.10. Device Types,' page 18.

The table should have a line with:

ACUHAYES Hayes Smartmodem 1200

There should be an additional note indicating Sun also supports the Ven-Tel 1200 PLUS (EC1200-32) and EC1200-31 (when set for 'AT' command recognition) with the ACUHAYES device type. A disclaimer for other 'AT' compatible might also be included - some work, but others won't.

While making this correction, the company's name is not 'Ventel', but 'Ven-Tel.' This table line should read:

ACUVENTEL Ven-Tel MD212 Plus

There is also a 'Ventel' in the following paragraph.

328. Synopsis: ownership of lpr device not discussed in Sys Admin Adding Hardware Sec
Release: 2.0

Description:

Sys Admin manual, chapter 'Adding Hardware To Your System', section 5.5, Adding A Printer To Your System' does not mention the printer device name entry must be owned by daemon, belong to daemon group, and also have permissions 660.

Topic: Graphics

329. Synopsis: fat vectors vary with slope (SunCore)
Release: 2.1beta, 2.0, 1.4

Description:

'1.4 Release Manual' and 'Release 2.0 System Summary' reports that "The actual width of fat vectors (line with line_width > 0) are now the same independent of the displayed slope of the line" as a SunCore bug fix. This does not seem to be the case for most view surfaces. A quick spot check shows:

View Surface	Model	Release	Results
bw1dd	100U	2.0	widths vary
pixwindd	100U	2.0	widths vary
bw2dd	170	1.4	widths vary
cg2dd	160	2.1beta	widths same
cgpixwindd	160	2.1beta	widths vary

330. Synopsis: error in redraw of raster outside windows of Sun-1 monochrome
Release: 2.0

Description:

There are actually 2 bugs--one is the error in the re-draw of the raster file outside the window system on the Sun-1 monochrome. The other is that the ends of the lines (circles in this code) are improperly placed in the same circumstances. They may be products of the same, underlying bug.

Topic: Hardware

331. Synopsis: Systech serial board hangs intermittently
Release: 2.0

Description:

The Systech MTI serial board hangs intermittently.
This hang occurs seemingly randomly. Once it has occurred the whole board is hung, and all ports are unusable until the system is rebooted.
There does not seem to be a way to reset the board after this hang has occurred.

Topic: Kernel

332. Synopsis: Sun 1/4" tape controller error message
Release: 2.0

Description:

When using a 9 track Wangtech tape drive and a Sun 1/4" tape controller, at the completion of a "tar cvbf" command, the error following messages are generated:

```
ar : RDST failure
ar : Archive hardware hang caused an error -- check your tape
ar0 : 8400 <HardErr> error at block #0
```

The error messages do not occur when using a Sysgen controller with a Wangtech or with an Archive tape drive.

333. Synopsis: system runs out of I/O buffers if kernel sends too many error messages
Release: 2.0

Description:

When running page mode on a console window, if the kernel sends many error messages to the console, the system will run out of I/O buffers and hang.

Topic: Utilities

334. Synopsis: Using the .ev command with a number greater than 2 gives error message
Release: 2.0

Description:

When the .ev command is used to define different environments, using .ev 3 (4 or 5) results in the error message 'Can't use ev.'

335. Synopsis: ld -A option dumps core with segmentation fault
Release: 2.0

Description:

ld -A option dumps core. Customer discovered this trying to dynamically link ABF programs while running. Basically, by doing

nm -gp | sed [script makes tiny .globl] | as | ld -A asmout myprog.o -o myprog

they can avoid having to run a full-blown ld against the libraries.

336. Synopsis: Calendar does not understand the yellow pages
Release: 2.0

Description:

Under 2.0 it is common to have all of the user passwd entries on a master yp server and have all of the other servers use the single copy of /etc/passwd. If this is done calendar will not work because it only access the local passwd.

```
cat /usr/bin/calendar
#! /bin/sh
#
#       @(#)calendar.sh 1.1 84/12/21 SMI; from UCB 4.4 82/11/07
#
PATH=/bin:/usr/bin:
tmp=/tmp/cal$$
trap "rm -f $tmp /tmp/cal2$$"
trap exit 1 2 13 15
/usr/lib/calendar >$tmp
case $# in
0)
        trap "rm -f $tmp ; exit" 0 1 2 13 15
(/lib/cpp calendar | egrep -f $tmp);;
*)
trap "rm -f $tmp /tmp/cal2$$; exit" 0 1 2 13 15
-->             sed '
-->                     s/:]*):.*:):[^:]*$/y=2 z=1/
-->             ' /etc/passwd           | while read x
do
        eval $x
        if test -r $y/calendar
        then
                (/lib/cpp $y/calendar | egrep -f $tmp)
2>/dev/null  > /tmp/cal2$$
                if test -s /tmp/cal2$$          then
                        < /tmp/cal2$$ mail $z
                fi
        fi
done
esac
```

337. Synopsis: Can't use chgrp on an nfs mounted file system
Release: 2.0

Description:

It is not possible to use "chgrp" on a file in your home directory when logged onto a client machine which is nfs mounted. The error message received in this circumstance is:

filename not owner

If you rlogin to the server and repeat this command, it will work fine. This is due to chgrp being setuid root.

338. Synopsis: timeout for uuxqt lock files is too short
Release: 2.0

Description:

Big news jobs often take hours to run. But uuxqt has a one-hour timeout on its LCK.XQT lockfile, so it will ignore the lockfile and the fact that the job is still going and restart the job.

Topic: sunview1

339. Synopsis: diagonal pw_copy makes 2 images
Release: 2.0beta, 1.x

Description:

When using ASCII terminals requiring even or odd parity (terminals unable to ignore incoming parity and must be set to even or odd) with script(1), characters that need their 8th bit set to '1' are not accepted by the terminal because they are sent with this bit a '0'. This is the result of script putting the tty into raw mode. This also applies to other programs that put their tty into raw.

Cbreak may be a better mode for these programs. If another route of access is available, e.g., thru another tty port, changing the modes from raw to cbreak via 'stty -raw cbreak > /dev/tty?' made script operate acceptably.

Topic: Compiler

340. Synopsis: No run time checks for underflow or overflow
Release: 2.0beta+, 1.1

Description:

Both the pascal interpreter and the compiler do not have run time checks for under/overflow. There is not documentation stating that this is the case.

341. Synopsis: ioinit(3F) does not work as documented.
Release: 2.0beta++, 1.4, 1.1

Description:

Ioinit(3F) is said to 'initialize several global parameters in the f77 I/O system, and attach externally defined files to logical units at run time.' Customer is porting software that opens and closes a port and then later again opens and closes it again. Customer wants to use ioinit(3F) to set the filename for the duration of the program run for particular logical unit numbers.

342. Synopsis: ioinit(3F) requires redundant loading of -lI77
Release: 2.0beta++, 1.4, 1.1

Description:

ioint(3F) requires a redundant specification of -lI77 for it to resolve all references.

Work around:

Specify a redundant -lI77 on f77 compile or load command line, e.g. f77 file.f -lI77 ...

Topic: Graphics

343. Synopsis: srandom missing from f77 libraries
Release: 2.1, 2.0

Description:

Using srandom(3) in a f77 pgm results in an undefined routine at compile time.

Topic: Compiler -- release 2.2

344. Synopsis: error in dbx and dbxtool with double in expression
Release: 2.2

Description:

If you compile the following program and use it with dbx, dbx will die

if you try to print the expression
(el+cl*epl). However, it will work without the parenthesis.

```
#include <stdio.h>
main ()

{
        double c1, e1, ep1, result;

        cl= 1.0;
        el=0.6;
        epl=0.1;

        result= (el+cl+epl)*(el+cl);
        exit (0);
}
```

345. Synopsis: equivalencing an array passed as an argument to subroutine fails
Release: 2.2

Description:
In a subroutine, trying to equivalence the elements of an array passed as an argument to simple variables causes f77 to fail, only reporting 'Termination code 139'.

Topic: Network

346. Synopsis: nfsd accumulating large amounts of cpu time
Release: 2.2

Description:
Server has slow response. Uptime reveals a constantly high system load average of about 5 or 6. A 'ps' shows nfsd accumulating large amounts of cpu time. Customer killed ypserve and all returned to normal.

347. Synopsis: uucp Hayes modem support doesn't work as documented
Release: 2.2, 2.0

Description:

Trying to override the auto-answer feature Sun's uucp sets for Hayes modems. The 2.0 Release Manual, top of pg. 12, indicates it is possible to issue Hayes 'Set' commands by prefixing the phone number in the L.sys file with a '-', but this doesn't work.

Other Sun Software Products

Topic: sunipc

348. Synopsis: could not install IPC for diskless clients under client's /
Release: sunipc1.0fcs

Description:

The IPC install scripts don't allow you to install the IPC "drive_C.pc" hard disk file under the root directory on diskless clients from the file server (you should be able to put it there, if you want to).

Topic: pc-nfs

349. Synopsis: incorrect internet numbers cause pc-nfs to fail
Release: pc-nfs1.0

Description:

User had a Sun and a PC. He used the internet numbers 1.1.0.0 for the Sun and 1.2.0.0 for the PC. When he tried to reboot the PC, he got an error message indicating that another network node was using the same internet address (1.2.0.0).

The user changed the internet numbers to 1.1.0.1 and 1.2.0.2 and now pc-nfs works correctly.

350. Synopsis: mode commands break printing
Release: pc-nfs1.0

Description:
PC type: any

If the following two mode commands are used after initializing printing to the Sun from the autoexec.bat file on the PC, files sent to the Sun are never printed.

```
net use lpt2: \hostname
mode com1: 9600,n,8,1
mode lpt1: = com1:
```

351. Synopsis: pc-nfs telnet does not always restore the keyboard vector
Release: pc-nfs1.0

Description:
If telnet is invoked, exited and left resident, invoked again, and permanently exited, it doesn't restore the keyboard vector.
Site specific information:

PC type (base hardware; i.e., PC-AT, Compaq, etc)
Compaq Deskpro 286
Hardware Configuration:
Graphics adaptor? Compaq EGA
Main memory size: 640K
Expansion memory size: 2Mb
Ethernet controller version: 3c501
Other cards in the system: yes; unknown
Disk configuration: 50Mb Toshiba
Software Configuration:
Operating system (and version): PC-DOS 3.1
PC-NFS version: 1.0
Resident Software: DOS-EDIT, EGA color changer
Network environment:
Tranceiver or T-Connector? transciever
Tranceiver type: David mgr.
Thick or thin Ethernet? Special 1Mb gateway
File server manufacturer, model, software, version:
DEC Vax-11/750 BSD 4.3 with Mt. Xinu NFS
Gateway info (if applicable):
Number of PCs being supported by server: 1 now, 40 planned

Topography: unknown

Topic: sunlink

352. Synopsis: Data lost on records > 132 chars
Release: sunlink1.0

Description:

Some data was lost in records exceeding 132 characters in length in files received in non-transparent 3780 mode utilizing space compression. A line feed character replaced the character at position 132 in each compressed record. Standard 3780 protocol restricts records to a maximum length of 144 bytes.

353. Synopsis: records > 80 chars not accepted in 2780 transparent mode
Release: sunlink1.0

Description:

The Gateway would not accept a file received in 2780 transparent mode with record lengths exceeding 80 bytes. An incorrect error message was displayed including all or part of the previous error message.

354. Synopsis: If in punch file with record < 80 bytes receives error msg
Release: sunlink1.0

Description:

A file containing a line feed character was created when a punch file containing blocked records with some record lengths less than 80 bytes was received in 2780 transparent mode. It was accompanied by the message, PUN FAILED TO RECEIVE.

355. Synopsis: blocked records < 80 bytes in 2780 transparent mode cause errors
Release: sunlink1.0

Description:
The Gateway does not accept blocked records with some record lengths less than 80 bytes received in 2780 transparent mode with no component selection. The message, KEYBOARD FAILED TO RECEIVE- INVALID BLOCK RECORD FORMAT, was displayed upon receipt of such a file from Wang VS, referring to a console message rather than a printer file. No file was created.

356. Synopsis: doesn't timeout when connection broken
Release: sunlink1.0

Description:
Gateway does not timeout when phone line connection is broken while Gateway is receiving a file.

357. Synopsis: rje -s -k and rjebsc -c options do not work in ASCII
Release: sunlink1.0

Description:
rje -s -k and rjebsc -c options do not work in ASCII mode. The gateway always tries to translate keyboard messages and -c console messages even when in ASCII mode.

358. Synopsis: Gateway does not time out a connection if waiting for data frame
Release: sunlink1.0

Description:
If the gateway is waiting for a data frame, it will not timeout if the sender goes
away. Normally, DSR would tell us that the sender had terminated, but we cannot monitor DSR in synchronous mode. The driver and the state tables should be changed to set a long (-to) timer value and disconnect if the timer expires.

359. Synopsis: Device/file name incorrect on some error messages
Release: sunlink1.0

Description:

Device/file name incorrect on some error messages. On some error messages, the device type (KEYBOARD, RDR, PTR, PUN) and filename are sometimes incorrectly reported as that for the previous file sent or received.

360. Synopsis: Error message "Formatting error" reported twice
Release: sunlink1.0

Description:

Error message "Formatting error" reported twice. WHen a file sent in 2780 or 3780 contains invalid control characters, the error message "...formatting error..." is reported twice.

361. Synopsis: two gateways with the same name can cause confusing errors
Release: sunlink1.0

Description:

Starting up two gateways with the same name can cause confusing errors. If the system administrator starts two rjebsc programs with the same "name", the rjemapper process will remember the second one. However, the first one is probably the one that will successfully start up. The rje user will get "gateway not responding" if he tries to use the rje command because it will try to communicate with the second instance. This problem could be minimized by moving the code that registers the process with the rjemapper further down in the startup code (preferably after the process tries to open /dev/bsc*).

362. Synopsis: Baud rates below 9600 baud cannot be set with syncinit
Release: sunlink1.0

Description:

Baud rates below 9600 baud cannot be set with syncinit. Syncinit cannot set the baud rate below 9600 due to a bug in zs_bsc.c. The variable tconst should be an unsigned short.

363. Synopsis: signon transmitted after every disconnect
Release: sunlink1.0

Description:
If 'rjebsc' is started with '-son' ,the defined signon will be transmitted every time rjebsc gets in touch with a host again after a disconnection.

364. Synopsis: 2780 mode without trailing blanks truncation
Release: sunlink1.0

Description:
The 2780 mode without trailing blanks truncation does not work properly if the send file consists of 4 x n + 1 records (n = integer).
(In 2780 mode 4 records per lineblock are sent.)
The last ETX-block with the last record is not sent. EOT is sent as termination of the consecutive ETB-blocks.
On the log file is obtained:
ERROR: RDR FAILED TO SEND FILE (.../input/...) FORMATTING ERROR

365. Synopsis: not running ifconfig causes bsc gateway not to respond
Release: sunlink3.0

Description:
Executing "rje -s -h gatewayname" without having done an "ifconfig {le0, ie0, etc} causes the msg "gateway does not reply" to appear and the rje process to fail. rjemapper will run, the gateway process will run, but the "rje" will not be able to find the gateway process.

366. Synopsis: INR manual wrong about GENERIC.add pseudo-devices
Release: sunlink3.0

Description:
SunLink INternetwork Router System Administration Guide, Version A of 1 June 1986, Page 14, Step 2, says to add GENERIC.add to your kernel configuration file. The error is when it says that the order of the lines is not important. However, the order is important. The 2 pseudo-devices

from GENERIC.add MUST be added to the config file in the same set of lines that the other pseudo-devices reside. Otherwise, the INR software is not properly loaded into the kernel. One of the problems that this can cause is that, from the local machine, you can "ping remote-ptp", but get "network unreachable" when you "ping remote".

367. Synopsis: OSI install procedures do not work as advertised
Release: sunlink3.0

Description:

In installation of Sunlink OSI 3.0 FCS, customer couldn't rebuild kernel after OSI was installed. Error appears as multiply defined symbols in X25 objects and kernel object files.
stubs_sunlink.o has x25domain and x25inet defined, as does stubs.o.
As a result, "make"ing the kernel blows up with duplicate symbols.

Topic: transcript

368. Synopsis: lpr fails to print full last character of long lines
Release: transcript2.0

Description:

Printing long lines of text using lpr with the Transcript 2.0 release causes the rightmost character (the 83rd character on the line) to be partially printed, losing the rightmost portion.

Setmargins does not correct or affect this problem. Enscript works correctly out to its limit of 90 characters per line. Based on this, the problem seems to be with pstext.

Topic: Ingres

369. Synopsis: left out single quotes in documentation for report command
Release: 3.0

Description:

On page 4-5 of the 3.0 Report Writer Reference manual it says under examples:

report mydb myrep (sal=10000,dept=toy)
If you try this command it will complain about badly placed parenthesis

370. Synopsis: errors calling ingres-net in an equel c program
Release: 2.0/23se19

Description:
You can not use
ingres host::dbname
in an equel c program without the preprocessor complaining
and the following error from the c compilier:
error 2754 pc[f][s] spawn: command doesn't exist

371. Synopsis: pathnames in Ingres can not be more than 22 characters long
Release: 2.0/23se19

Description:
Pathnames in Ingres can not be longer than 22 characters
long. The backend will bomb if there are more than 22
characters in the path.

372. Synopsis: undocumented maximum length of path names for files referenced
Release: 2.0/23se19

Description:
The maximum length of path names is 42 characters. If you
try to compile an application which references files with
a longer path name you get the following abf error:
9043: Error with parameters "file name".

373. Synopsis: problem with using curses in an equel c program (Ingres)
Release: 2.0/23se27

Description:
You are not able to use Suns' curses subroutines in an
equel C program. You will get multiply defined subrountines.

374. Synopsis: Equel program name length
Release: 2.0/23se27

Description:
If you name an equel file with a name longer then 14 characters it will not work with the eqc preprocessor.
You will get the error msg.:
Illegal system filename "testtesttest.qc" used.

375. Synopsis: problems with the installation guide
Release: 2.0

Description:
Additional release information:
23se19 Installation and operations guide Rev C (Aug 21 84)

sec 1.2.1
use vipw command instead of vi /etc/passwd to make use of locks
sec 1.2.2
since no password is entered in /etc/passwd, no password is required to log in as Ingres. this is a security problem. should recommend logging in as Ingres and running passwd immediately.
sec 1.8.4
permissions for jnlmerge and recoverdb should be rwsr-x--x not rxsr-x--x.
should have gbf and graph in bin but they are there.
would like an ls -lg listing rather than an ls -l.
the listing given does not match what is on the machine:
no osl file in doc
no group w permission in doc for crdbtmplt

376. Synopsis: Error in READ THIS FIRST - August 14, 1986
Release: 3.0

Description:
The READ THIS FIRST is documented as follows:

section 5 - Updating SunINGRES 3.0 to 3.0 Upgrade

```
% cd ~Ingres/bin
% rm -f *
% cd ~Ingres/lib
% rm -f *
% mt -f /dev/nrtape0 fsf 1
% tar xpfv 126 /dev/rtape0

subsection 3 Run setuid as root. Be sure that ~Ingres/bin
             is in your path

# setuid
```

There are three problems with the above cookbook procedure. First, a cd to Ingress' home directory should be done before the tar statement. Second, the tar statement is incorrect, the blocksize 126 should be taken out. Third, before running setuid a cd to ~Ingres/bin should be done.

It should be as follows:

```
 section 5 - Updating SunINGRES 3.0 to 3.0 Upgrade

% cd ~Ingres/bin
% rm -f *
% cd ~Ingres/lib
% rm -f *
 % cd ~Ingres
% mt -f /dev/nrtape0 fsf 1
% tar xpfv /dev/rtape0

subsection 3 Run setuid as root. Be sure that ~/Ingres/bin is in your path

 # cd ~Ingres/bin
# setuid
```

377. Synopsis: no documentation on enviroment variables ING_BACKEND and
Release: 2.0

Description:

Additional release information:
23se19 Installation Guide Rev C (Aug 21 84)

There is no documentation about the enviroment variables

ING_PRINT and ING_BACKEND.

Known patches:

ING_PRINT should be set to lpr's home (/usr/ucb/lpr or whatever. It is used by abf to print a report to the printer (Note: there is a bug in abf so you can't send a report directly to the printer regardless of whether ING_PRINT is set).
ING_BACKEND should be set if two installations of ingres are running on one machine so ingres knows which backend to get for each ingres.

378. Synopsis: EQC sometimes generates invalid field names
Release: 2.0/23se19 Ingres on Sun Unix 1.2

Description:

With a series of "clear field name" in an EQC program, periodically the eqc preprocessor generates a fieldname across newlines by terminating the line with a backslash and then starting off the next line with a blank. If the split happens to come in the character string that is used to describe a fieldname, an "unknown" fieldname is generated.

379. Synopsis: missing info in Read This First 3.0
Release: 3.0

Description:

2.0 Ingres does not work with Sun O/S 3.0. The 3.0 Read This First does not mention this.
The Ingres 3.0 update was not sent out with the 3.0 O/S update to support contract customers. Any customer updating to 3.0 O/S is now stuck until the ingress 3.0 update tape arrives. (This has burned at least 2 customers already).

380. Synopsis: Bug in doing Joindef's, QBF, over Network/Ingres
Release: 3.0/se25 Ingres on Sun Unix 3.0beta

Description:

Bug in doing JoinDef's over Network/Ingres. There is a bug (#8494)

that involves setting permissions on the mqbf###.tmp file and doing a "copyin" to the database. This will be a problem no matter where we write the temp file.

Topic: sunipc

381. Synopsis: First Choice software does not run on SunIPC.
Release: sunipc1.0

Description:
First Choice by Software Publishing Corp. does not work on the SunIPC. When the user attempts to start it, (from A:, B:, or SunIPC local hard disk C:), the disk spins briefly, then the SunIPC hangs. The user has tried all three display modes, cga, monchrome and hercules.

The software (which includes database, word processing and spreadsheet), is supported by Software Publishing on the IBM PC, PC XT and PC AT. The user is able to run it on all those systems.

Topic: pc-nfs

382. Synopsis: incompatability problem with user software (xtree)
Release: 3.0

Release: pc-nfs1.0

Description:
Site specific information: PC type PC-AT
Hardware Configuration: Main memory size: 2M
Software Configuration:
Resident Software: pc-nfs software
Application program being used when problem occured: xtree
Network environment:
Tranceiver type: 3-com
Thick Ethernet
File server: Sun Microsystem 3/180
Number of PCs being supported by server: 2

xtree, a utility by Executive Systems does not work correctly

on pcnfs mounted file systems. This is a program that graphically shows the directory structure and files on the disk. One of the options is to view the file. It works fine on the local hard disk or on a floppy, but does not work at all on the nfs mounted file system.

Topic: sunlink

383. Synopsis: HASP compression will put in extra char
Release: sunlink1.0

Description:
In the HASP compression mode, rjebsc will put an extra character if the last character is a duplicate character. e.g., "go to 100" becomes "go to 1000".

384. Synopsis: Bad NAK response leads to "out of mbufs"
Release: sunlink1.0

Description:
Our response to HASP nak is either ack/nak followed by another nak from the host. Eventually we die with "out of mbufs". This happens only rarely.

385. Synopsis: 130+ lines mishandled in 2780/3780
Release: sunlink1.0

Description:
The Gateway apparently allows print lines to have a maximum length of 132 characters. It attempts to segment longer records into 132 character increments. Print records longer than 130 characters, received non-transparently in 3780 or 2780 mode, were split after the 130th rather than the 132nd character, apparently because the two character vertical forms control sequence at the beginning of the record was included in the character count.

386. Synopsis: Received records = 132 characters are not treated correctly.
Release: sunlink1.0

Description:
Received records = 132 characters are not treated correctly. One extra linefeed is inserted. For 3780: Even records with compressed blanks are wrong after decompression to 132 characters. For 2780: Records with horisontal tab's expanded to 132 characters work properly.

Topic: transcript

387. Synopsis: ps4014 command does not work properly in some cases
Release: transcript2.0

Description:
When the customer tries to print his graph, only the axes show up. The graph never does print.

388. Synopsis: 'ptroff -F Helvetica' fails to always correctly change fonts.
Release: transcript1.0, transcript2.0

Description:
'ptroff -F Helvetica' fails to always correctly change fonts. Some italics text appears in regular font and the following regular text appears in italics. There are also cases when bold prints using the regular font.

Topic: sununify

389. Synopsis: btree indexes are getting corrupted
Release: sununify1.0

Description:
Database has a record with 40 fields, 30 of which have a btree index built on them. Every 2 - 4 weeks when adding or deleting the error message: internal error: check error log, will appear. The error log says to rebuild btree. When this is done, the customer receives the same error message about another index. Each time they

have to rebuild anywhere from 1 to all of the indexes. There appears to be no pattern to the problem and at different times different indexes are effected.

390. Synopsis: SQL does not handle (complicated) queries
Release: sununify1.0

Description:

Posing a query for which the result depends on the order of the second and third clause gives incorrect results. In both cases for at least the initial response to the query, the third conjunct appears to be ignored.

391. Synopsis: floating point fields cause dbdump fatal error
Release: sununify1.0 with Sun release 3.2

Description:

Having a record with a floating point field will cause dbdump to fail with:

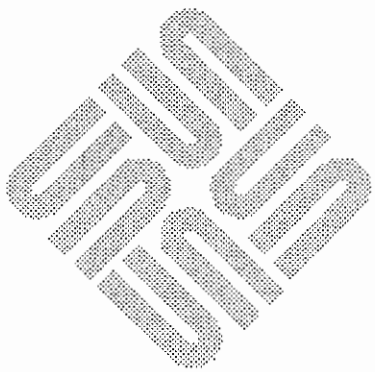
[DB_INVALID_RETURN] Fatal Error: an unexpected return was encountered.

Work around:

Make sure that there is at least one field in the database that has a display characteristic >= 8. For example, this could be a NUMERIC(8) field, and AMOUNT(8) field, a FLOAT (8x) field, or a STRING(8) field.

Revision History

Revision	*Date*	*Comments*
2	2 February 1987	First issue of Software Technical Bulletin (Software Information Services).



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