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product
release
notes

XENIX Release 3.5

CONTENTS

1. INTRODUCTION

This document summarizes the new features, bug fixes, and known limitations found in Release 3.5 of the XENIX product. Information is supplied about the hardware and software supported by the release, and usage notes are provided to clarify subtle points of operation or migration from the previous release.

If you have purchased Intel XENIX 286 R3.5, please disregard all references to 386/XX processor boards and the 80387 floating point chip.

2. SUPPORTED HARDWARE

This release of XENIX supports the following hardware:

2.1 Processor Boards

2.1.1 286 Processor Boards The iSBC 286/10 and iSBC 286/10A CPU boards with V2.0 or greater firmware are supported.

The iSBC 286/12, iSBC 286/14, and iSBC 286/16 CPU boards with V2.2 or greater firmware are supported.

2.1.2 386 Processor Boards The iSBC 386/21, iSBC 386/22, iSBC 386/24, iSBC 386/26, and iSBC 386/28 CPU boards with V1.1 or greater firmware are supported. They must have a PBA number of PBA 149129-004 or greater.

An 80287/80387 math coprocessor is supported and strongly recommended. The 80387 must have a stepping of at least B0.

2.2 Memory

A minimum of 896 Kbytes of memory is required. A maximum of 16 Megabytes of memory is supported. The amount available for kernel, user, and system use depends on the amount of swap space provided on the hard disk. Please use the following table as a guide to the amount of memory that can be used. Additional memory may be used as a RAM disk. Please see the *Reference Guide* for further information on using RAM disks.

Hard Disk Type	Swap Size	Maximum Memory
35 MB Priam	4104 MB	4 MB
40 MB Quantum	4104 MB	4 MB
62 MB Priam	4104 MB	4 MB
85 MB Maxtor	9216 MB	9 MB
86 MB Toshiba	9216 MB	9 MB
105 MB Maxtor	16416 MB	16 MB
140 MB Maxtor	16416 MB	16 MB

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1   XENIX is a trademark of Microsoft Corporation.

2   iSBC 286/10, iSBC 286/10A, iSBC 286/12, iSBC 286/14, iSBC 286/16, iSBC 386/21, iSBC 386/22, iSBC 386/24, iSBC 386/26, iSBC 386/28, iSBC 215g, iSBC 214, iSBC 208, iSBC 188/48, iSBC 188/56, iSBC 544, iSBC 544A, iSBC 534, iSBX344, iSBX354, iSBC 546, iSBC 547, and iSBC 548 are trademarks of Intel Corporation.

When powering the system up, the System Confidence Test (SCT) must be allowed to run to completion; Otherwise, a Non Maskable Interrupt (NMI) may occur when booting the system, since memory has not been initialized.

All CX series memory cards are supported.

Hardware problems have been seen with some EX series memory cards. If your system has problems when EX memory is installed, contact Intel Customer Support.

2.3 Hard Disk Controller

The iSBC 215g is supported with V2.5 or greater ISO-S firmware, or V1.2 or greater ISO-N firmware.

The iSBC 214 is supported with V2.3 or greater firmware.

All versions of the iSBC 226 are supported.

2.4 Communication Controllers

The iSBC 188/48 is supported with V1.1 or greater firmware.

The iSBC 188/56 is supported with all firmware versions.

The iSBC 546 is supported with V1.1 or greater firmware.

The iSBC 547 is supported with V1.1 or greater firmware.

The iSBC 548 is supported with V1.1 or greater firmware.

The iSBC 544 and iSBC 544A are supported with V2.5 or greater firmware. The obsolete iSBC544 precludes operation with more than 896 Kbytes of main memory.

An iSBC 534 driver is supplied, but does not provide modem support.

2.5 BitBus Controllers

The iSBX 344 BitBus controller is supported with V2.0 firmware.

2.6 Tape Media

Use only Intel approved cartridge tapes. The Archive part number for 450 ft. media is: 09C, the part number for 600 ft. media is 60C. Be aware that archives made with other media types may not be readable.

3. SUPPORTED SOFTWARE

3.1 Binary Compatibillty

This release provides complete binary compatibility with previous XENIX releases for application programs. This includes non-Intel device drivers. Individual applications may require rework if they contain 286 dependencies.

3.2 XENIX Networking Software

This release is compatible with Release 2.0 with Update 0 or later software.

3.3 iDIS

This release is compatible with Release 2.0 or later software.

3.4 APEX

This release requires Release 3.1 or later software.

4. NEW FEATURES

4.1 Installation and Configuration

This release no longer supports **icp** as a system configuration utility. The **scp** utility must be used. **icp** is now only intended for configuring non-standard hard disks, iSBC534 and iSBC226.

scp no longer asks the user how many communication boards are installed. This is determined automatically. Thus the user is freed of the task of having to know the number and type of communication boards installed.

scp displays both the formatted and unformatted hard disk sizes.

4.2 Utility Changes

The new utility **gs** provides information about the current kernel and hardware configuration in the system. The utility is primarily used by **scp** during system configuration.

The utility **assign** now allows any users group id to assign a device. Previously **assign** required a users group id greater than 200 to assign a device.

The new utility **blogin** provides the system administrator with a shell that starts the system backup or restore activities.

The new utility **ibr** assists in the system administration tasks of backup and restore. It provides the user with a menu oriented method of performing backup and restore activities.

A new utility **iBR** standalone, is provided for mirror hard disk dumps to cartridge tape.

The new utility **icpio** is an enhanced version of **cpio** that allows the user to specify the input and output devices, change the output message for an archive device error, and set a flag that specifies the archive media size.

The new utility **cleave** allows a user to supply a list of file names and have them arranged in groups whose total size does not exceed a specified amount.

The utility **ps** now provides a continuous status display option, a kernel stack backtrace option, alternate core file, and /dev/kmem file.

The utility **pstat** now provides a continuous status display option, a flag to print only totals, and flags for alternate namelist, alternate core file, and /dev/kmem file.

Both **ps** and **pstat** no longer require the "-n namelist" flag if the booted kernel is not "/xenix."

The utility **shutdown** now allows the user to invoke user-specified programs at certain points in its processing. It also provides for optional fsck'ing of the file systems before system shut down.

The utility **dial** now has Auto Call Unit (ACU) support for 9600 baud. This is only intended for XENIX Networking Virtual Terminal (**vt**) uucp connections.

The utility **kdevs** now reports vector conflicts and provides enhanced error reporting.

4.3 Communication Drivers

Three new defines were added to the "i188.h" file that controls on board flow control for the 546/547 and 8 bit parity. These are provided to allow a system to have specific communication ports configured to address unique processing requirements. In general

these steps are not required. The special defines are:

— **I188_OUT_XONBOARD** - output onboard flow control.

— **I188_INP_XONBOARD** - input onboard flow control.

— **I188_8_PLUS_PARITY** - allow 8 bits plus parity setting.

The following steps describe how to turn on input and output on-board flow control for the first two ports of a system with a 546 (board 0) and the first two ports on a 547 (board 1).

1. Go to the "/sys/cfg" directory.

2. Locate the following line in the "c188.c" file.

   unsigned   i188special[NUM188*I188LINES];

3. Replace it with the following lines:

   unsigned   i188special[NUM188*I188LINES] =
   {I188_OUT_XONBOARD | I188_INP_XONBOARD,
   I188_OUT_XONBOARD | I188_INP_XONBOARD,
   0, 0, 0, 0, 0, 0, 0, 0 ,0, 0,
   I188_OUT_XONBOARD | I188_INP_XONBOARD,
   I188_OUT_XONBOARD | I188_INP_XONBOARD,
   0, 0, 0, 0, 0, 0, 0, 0, 0, 0};

4. Type **make**. This will update the library **lib_ioc** and **lib_ioc.f**.

5. Go to the "/sys/conf" directory and type **make**. This will create a new kernel ("xenix") with the changes in it. Move "xenix" to "/xenix." Reboot the system as instructed in the *Installation and Configuration Guide*

Note that each board in the data structure has twelve possible lines. Each line position that does not use the mentioned defines should be set to zero. To configure a line with 8 bits plus parity support (default setting is 8 bits with no parity), follow the same procedure as with flow control except replace the flow control defines with the parity define.

A new command code **T_IDLE** was added to the include file "tty.h" to allow a driver to sleep for a short period of time while waiting for the board to clear its USART. The sleep time is 2 or 3 characters depending on the baud rate. This is of use when writing serial device drivers.

4.4 Miscellaneous

Two logins were added to the system, *shutdown* - to allow a non-root user to shut down the system and *backup* - to allow a non-root user to backup and/or restore system files.

The man macros now report "Xenix 3.5" instead of "Xenix 3.0."

5. USAGE NOTES

5.1 Installation

This release no longer supports MS-DOS installation.

5.2 Configuration

Modems and printers are not supported on the console port.

Do not connect terminals with baud rates of 300 baud or slower to the console. The console driver does not process characters correctly at slow baud rates.

You may not enable more than 16 lines in "/etc/ttys." init reads only the first 16 enabled entries of "/etc/ttys" during multi-user initialization. scp enforces this limit during system configuration.

Do not configure a parallel printer into a system which does not have a parallel port.

Initial system configurations and system re-configurations for 286/380 systems use icp. Please refer to the XENIX R3.4 *Installation and Configuration Guide* for more information on icp.

5.3 Communication Drivers

- If a user unplugs a logged in terminal from the 546/547 communications board, the user is logged off. To prevent log off, issue the command stty clocal prior to unplugging the terminal.

- Serial printers default to 7 bits plus parity. To change to 8 bits with no parity, edit the "/etc/printcap" file and add the line:

  :cfc#040:cfs#060:\

5.4 Libraries

Since the 546/547 has a three character queue onboard, the ioctl calls that previously used TCSETA and expected immediate changes, must now use TCSETAF. Otherwise extraneous characters may appear on the screen.

Recompile all application programs that use the library module getpass, so that the correct getpass links in. The previous version of getpass did a TCSETA, it now does a TCSETAF.

5.5 Utilities

Use the current iBR standalone utility diskette (V1.3) that is shipped with the Update package. Do not use any previous versions.

5.6 XENIX Networking software

This release no longer supports the installation of XENIX Networking software Release 2.0 directly from the shell environment. Please disregard any references in the XENIX Networking software *README* file that describes this method of installation. Install the XENIX Networking Software using the *instlsys* software installation utility only. For more details please refer to Section 3 in the XENIX Networking Software *Installation and Configuration Guide* (Order Number: 135146-002).

Execution of the following XENIX Networking commands result in a slightly different display on the invocation terminal. This release displays the prompt for the password and the action on the same line. Previous releases displayed them on separate lines.

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3   MS-DOS is a trademark of Microsoft Corporation.

- **net use** - When using the net utility to establish an alias connection to another node and the user is prompted for a password.

- **pushnet** - When used with the "-o password" option.

- **pullnet** - When used with the "-o password" option.

The Virtual Terminal session-end display differs slightly from the XENIX R3.4 environment. Although the end characters "˜." echo to the invocation terminal as a "˜n" or "˜˜," the correct disconnection still occurs.

5.7 iDIS Software

If the user installs iDIS on this release, check the "/etc/passwd" file entry after iDIS installation for the "shutdown" login. This entry must have "/etc/shutdown" as a login shell.

5.8 System Recovery

If you inadvertently remove the "/boot" file you will be unable to boot from the hard disk. To recover a lost "/boot" file:

1. Boot the file "/xenix.f" from Boot Floppy #1 labeled: **Intel XENIX R3.5 Boot 1 of 3**.

2. When the menu appears, type a control-backslash. This prompts for the second boot floppy. Insert the second boot floppy labeled: **Intel XENIX R3.5 Boot 2 of 3** and type a return. The system then prompts with "bootsys->."

3. Type **mount /dev/w0a /wini**.

4. Type **cp /boot2/boot /wini**.

A new "/boot" file is installed on the hard disk. If you have lost the second stage boot loader from track 0 of the hard disk, do steps 1 and 2. Type **instl -u**. This reformats track 0 only and installs a new second stage boot loader.

5.9 Print filters

The following paragraphs explain the basic operation of print filters in the XENIX operating system. This material is provided to clarify print filter operation.

A print filter is a process that spooled print files pass through on their way to the printer device. A print filter modifies data or printer controls and passes the modified file to the printer. The filter strips invalid control sequences, passes valid control sequences, and modifies certain printable characters (such as converting tabs into appropriate spacing, newlines into newline/carriage returns) of a file.

Several different print filters exist within a XENIX system; each type of printer may have its own filter. A filter program (**lpf**) and a filter table (specific to each type of printer) are compiled to produce a print filter.

A print filter is invoked only via the **lpr/lpd** spooling mechanism; a file sent directly to the printer is not filtered.

Three processes and a data file control printing via print spooling. The processes are: **lpr** (sends files to the spool directory) , **lpd** (the daemon that prints files from the spool directory and passes them through a print filter or directly to the printer), and a filter (performs the filtering and passes the data on to the printer). The data file is "/etc/printcap."

The file "/etc/printcap" establishes the basis for the print spoolers. For each type of printer specified in "/etc/printcap," there must be an entry specifying a spool directory, and an entry specifying the print daemon; there may be an entry specifying an input filter, and an entry specifying an output filter.

The input and output filters processes characters such as tabs, backspaces, carriage returns, newlines, and EOF. The output filter does not pass control sequences; it merely strips off any characters less than a space (hex 20). The input filter does pass control sequences. If both an input filter and an output filter exist in a printcap entry, the input filter is not used. If the printcap entry includes only an output filter, then it is used. If only an input filter is specified, it is used.

Refer to "/usr/lib/pf" for information on creating print filters.

6. BUG FIXES

6.1 Communication Drivers

- The performance of the 546/547 driver was improved by removing a redundant buffer clearing each time the driver was called.

- Problems were fixed in the 546/547 driver that occurred when a signal was taken while executing in the close routine. This helps prevent tying up lines with improper closes.

- Exclusive opens in the 546/547 driver are now logged for process accounting if the user has an id of 0 (root). Previously accounting was not done if a process with user id of 0 attempted to open a line that was already opened exclusively.

- Modem support for the 546/547 driver was improved in the areas of proper carrier detect/loss handling and DTR setting/disabling.

- The 546/547 driver now properly sets start and stop bits. Previously the driver did not differentiate between 1 or 2 start/stop bits.

- The 546/547 driver now properly flushes a line if a X-OFF occurs in the close routine. Previously the driver remained in the X-OFF state until the system was rebooted.

- The 546/547 driver now correctly handles carriage return delays.

6.2 Miscellaneous Drivers

A new iSBX344 (BitBus) driver was added that corrected problems in the previous driver.

6.3 Configuration

The utility scp had the following fixes made to it:

- The European time zone specifications now set correctly.

- Extra spaces are no longer placed before keywords in "/etc/default/dump" and "/etc/default/restor."

- The baud rate for serial printers is now placed in the "/etc/printcap" file.

- The return code from the kernel build is now checked for possible failures before copying the kernel to "/xenix."

- The "xenixconf" file is now saved before being changed.
- The "current" file will now have null fields in the console line set to N/A

The utility **scp** had the following additions made to it:

- Maximum file sizes of more than 10 MB.

6.4 Kernel and Libraries

- A problem that caused user-supplied floating point exception handlers to fail has been corrected.
- The Version 7 (V7) line disciplines now turn off parity when changing to raw mode. Previously the V7 line disciplines did not turn off parity when switching from 7 bits plus parity canonical mode to 8 bits no parity raw mode. This caused problems with some mixes of applications and terminals.
- The kernel routine **preadi** no longer unlocks processes when doing I/O from a hard disk.
- A problem that caused the hex character 0xec from not being passed to the character device has been corrected.
- The library modules **setpgrp** and **getpgrp** now work correctly when used in large and huge model programs.
- The library modules **ssignal** and **gsignal** now work correctly when used in large and huge model programs.
- A problem that caused shared data area corruption after 64000 accesses has been corrected.
- A problem with 80287/80387 initialization has been corrected. Previous releases did not place the co-processor into protected mode.
- The disksort routine now correctly sorts disk requests. Performance is improved on heavily loaded systems.
- The I/O buffering scheme now uses all of the I/O buffers correctly. Performance is improved on heavily loaded systems.
- The 226 SMD device driver now uses the disksort routine for disk requests. Performance of the driver is improved.

6.5 Utilities

- The utility **lpdrestart** no longer fails on certain invocations. Lpdrestart now checks to see if the **lock** file in the spool directory is empty before killing the daemon. Previously the line printer daemon (**lpd**) logged the user out if the lock file was empty.
- The utility **shutdown** now correctly kills the line printer driver (**lpd**). Previously **shutdown** could not unmount the "/usr" file system because it could not kill the daemon. Other fixes included notifying the system administrator if not all the processes were killed, and providing more time for the XENIX Networking software daemons to exit.
- A problem that did not allow multiple **lpr** accesses has been corrected.
- The utility **ln** no longer references a non-existant utility when attempting to link across file systems.

- The setperms utility now correctly parses the -B option.

- The setclock utility now works correctly with October dates.

- The du utility was fixed so it doesn't "core dump" after 8 directory levels.

- The strings utility was fixed so it won't attempt to print the character 0x80.

- The iBR standalone utility was modified to operate in 215 mode when used on a 214 board that has version 2.4 firmware. This was done to work around a hardware problem that is being investigated. This means that on a 140Mb Maxtor, the backup time is increased 12.5 minutes. The old backup time was about 45 minutes, so now it takes about an hour.

6.6 Miscellaneous

- The page width field (**pw**) of "/etc/printcap" now accepts up to 1024 characters.

- The device nodes for the iSBC208 are now correct.

- A problem that caused a system to halt when a processor board containing more memory than available swap space is installed into a system has been corrected.

7. KNOWN LIMITATIONS

7.1 Installation and Configuration

- The **uuconfig** utility does not correctly differentiate modem lines whose minor numbers are the same. It also incorrectly handles minor numbers greater than fifteen. To avoid the greater than fifteen limitation, the system administrator can configure all modem lines on the first serial controller.

- The **uuconfig** utility does not correctly check for duplicate dialer abbreviations. The system administrator must avoid entering multiple numeric codes for a dialer abbreviation.

- The **kvectors** utility does not correctly handle the case where four interrupt vectors are required by a device.

7.2 Communication Drivers

- The 546/547 V1.1 firmware does not support Data Terminal Ready (DTR) flow control.

- The 544 driver parity support for serial lines is tied to the character size. The only permitted settings for the 544 are: 7 bit characters with even or odd parity, or 8 bit characters with no parity. this is a limitation of the current firmware.

- The -**hupcl** option for modem lines is not supported. All serial drivers hang up a modem line when the last process that has it open closes it, regardless of the state of the hupcl bit for the line.

- The seldom-used **cread** option for serial lines is only supported on the console. Other Intel drivers ignore attempts to disable input interrupts.

- The current serial drivers can fail to resume output if a small write, containing a delay, is written to an idle line. If this occurs, a Control-S, Control-Q sequence resumes output on the line.

- Parity and framing errors are not detected because the 546/547 firmware converts parity and framing errors to null bytes. XENIX is unable to differentiate between

an error and a legitimate null byte.

7.3 Kernel and Libraries

- The **sbrk(0)** call in Large and Huge Models returns the address where the next memory allocation occurs (that is in the next segment). This is not necessarily the address of the last currently allocated byte as documented. A work-around for this is to create an sbrk function (in Large/Huge Model only) that consists of the statement:

  return(brkctl(BR_IMPSEG, (long)arg, (char far *)0));

- User programs can allocate large numbers of small memory segments, possibly causing the system to crash because of a **coremap** overflow. The configuration of the coremap size is described in the *Installation and Configuration Guide.*

- A problem occurs with a **fork** system call issued by a process with semaphores. If the number of semaphores cause the file table to overflow, the child process is created without inheriting the correct semaphores.

- Each **sdget** system call allocates one slot in the process' Local Descriptor Table (LDT), that is not reclaimed when the user frees the shared data segment. The LDT has a maximum size of some 8000 entries. This means a process cannot successfully call sdget more than about 8000 times. Since no process is likely to need more than 8000 distinct shared data segments, it is recommended that users attach the shared data segment the first time it is needed and simply keep it around for the life of the process.

- Block input transfers from a character device (terminal) using the VMIN/VTIME feature do not always return a full block when the system is under load.

- A problem is known in the handling of swap space for Large and Huge Model Processes with the sticky bit on. The sticky bit preserves the swap image when a process exits. For Large and Huge Model processes this is handled incorrectly and can result in the corruption of swap space. XENIX's use of Direct Memory Access (DMA) loading makes the sticky bit feature unnecessary.

- The **printf** library function fails if an attempt is made to print a number whose exponent requires more than 3 print positions.

7.4 Utilities

- The utility **cron** does not update its internal time when the system time is changed. **cron** uses the "%" symbol as a newline in the command section of crontab entries. The entry in the default crontab file for setting the system time from the real-time clock:

  /bin/date '/etc/setclock '+%m%d%H%M%y"

  does not work correctly. This problem will be fixed in a future update.

- The utility **shutdown** cannot dismount the "/usr" file system if the super user invokes the command from current working a directory within the "/usr" file system.

- The command **kill -1 1** hangs the system if the XENIX Networking software servers or consumers are enabled. The command **kill -1 1** returns to single user mode if the XENIX Networking software is not enabled. The **shutdown** command should be used to put the system into single user mode.

- The **restor** command does not correctly restore a dump of the root partition of the disk. It is recommended that user files not be placed in the root partition. If a file must be placed in the root partition, it can be backed up using **tar**, **cpio**, or the **ibr** facility.

- When the **restor** command is used to restore multiple backups (i.e., the periodic and then the daily backup), files from early backups (the periodic dump) that were deleted before the later (daily) backups are restored. This may cause users to run out of disk space when the file-system is nearly full.

- The **restor** utility does not reload a floppy file system from streamer tape.

- The current C compiler does not generate re-entrant code for floating point operations. This means that signal handlers cannot do floating point operations without destroying intermediate results that are in use by the code that was executing before the signal occurred.

- The current C compiler has been observed to generate incorrect optimization of floating point in Large Model. The work-around for this problem is to compile Large Model programs using floating point arithmetic without the optimization (**-O**) option.

- The current C compiler incorrectly optimizes loops whose loop variables are array elements. The work-around is to compile modules containing such loops without optimization (no **-O** flag).

- The current C compiler may generate '**assertion error**' messages when attempting to compile complex expressions. If this occurs, the problem can be alleviated by breaking the expression into parts.

- The options of **icp** and **cfgi215** used to add non-standard disks may react unpredictably to illegal inputs.

- The **fsck** utility sometimes miscalculates the number of links for an orphan file. If the file is moved out of lost+found and **fsck** is re-run, the link count is corrected.

- The **whodo** utility fails to line up the output for the console with the output for other terminals.

- The **more** and **vi** commands fail with certain combinations of environment and arguments. The problem seldom occurs and any change in the size of the environment variables or the argument list works around the problem.

- The **vi** editor expands macros with keyboard signals disabled. This becomes relevant if the user mistakenly attempts to expand a macro that references itself. The editor hangs and must be killed from another terminal.

- Mailboxes are created with read permission (644) for all users. Users who wish to protect the privacy of their electronic mail may manually protect their mailboxes. Also, note that electronic mail that is in transit between systems is publicly readable until it is delivered.

- When restoring a single file with **restor**, a long start-up time occurs with tape because of multiple opens and closes on the device.

- The **fixbb** utility does not support fixing bad blocks on devices other than **/dev/w0b** unless the device contains a file-system. In particular, this affects the XENIX swap area. The swap area may be moved elsewhere, but it is not possible to repair bad blocks if this is done.

- When making file systems with **sysadmin**, the number of inodes created is calculated based on an average file size of two blocks. This is done to maximize the likelihood that there are enough inodes in the new file system. There is a fixed upper limit of 64K inodes per file-system, that sysadmin attempts to exceed. The work-around is to make the file-system manually using the same mkfs command that sysadmin attempted, but supplying a ratio of data blocks to inodes as small as possible such that there are less than 64K inodes.

- The **dtype** utility does not correctly identify file-systems.

- The C beautifier utility (**cb**) gets confused and generates incorrect output for programs that have braces inside comments.

- The debugger (**adb**) sometimes fails displaying the memory map of Large and Huge Model programs. Adb sometimes generates spurious reports of segments with impossible values for Large and Huge Model processes.

- The **ls** utility does not print out inodes greater than 32K correctly.

- The **cu** utility has a built in default of 1200 baud for modems. Although the first entry in the "/usr/lib/uucp/L-devices" file might be 2400 baud, the user still must specify 2400 baud on the invocation of cu.

- The **ibr** utility must use raw devices and not block devices for its archives.

- The nomenclature used for restoring files with the utility **ibr** must be the same as the one used to backup the files. This is further explained in the *System Backup and Restore Operations iBR 3.5* manual.

- The library model **calloc** does not check if the total requested amount is is greater than 64K.

- The print filters do not handle the 'pl' option from the printcap file correctly.