devices.txt

LINUX ALLOCATED DEVICES (2.6+ version)

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This list is the Linux Device List, the official registry of allocated
device numbers and /dev directory nodes for the Linux operating
system.

The latest version of this list is available from
http://www.lanana.org/docs/device-list/ or
ftp://ftp.kernel.org/pub/linux/docs/device-list/. This version may be
newer than the one distributed with the Linux kernel.

The LaTeX version of this document is no longer maintained.

This document is included by reference into the Filesystem Hierarchy
Standard (FHS). The FHS is available from http://www.pathname.com/fhs/.

Allocations marked (68k/Amiga) apply to Linux/68k on the Amiga
platform only. Allocations marked (68k/Atari) apply to Linux/68k on
the Atari platform only.

The symbol {2.6} means the allocation is obsolete and scheduled for
removal once kernel version 2.6 (or equivalent) is released. Some of these
allocations have already been removed.

This document is in the public domain. The author requests, however,
that semantically altered versions are not distributed without
permission of the author, assuming the author can be contacted without
an unreasonable effort.

In particular, please don't sent patches for this list to Linus, at
least not without contacting me first.

I do not have any information about these devices beyond what appears
on this list. Any such information requests will be deleted without
reply.

**** DEVICE DRIVERS AUTHORS PLEASE READ THIS ****

To have a major number allocated, or a minor number in situations
where that applies (e.g. busmice), please contact me with the
appropriate device information. Also, if you have additional
information regarding any of the devices listed below, or if I have
made a mistake, I would greatly appreciate a note.

I do, however, make a few requests about the nature of your report.
This is necessary for me to be able to keep this list up to date and
correct in a timely manner. First of all, *please* send it to the
correct address... <device@lanana.org>. I receive hundreds of email
messages a day, so mail sent to other addresses may very well get lost
in the avalanche. Please put in a descriptive subject, so I can find

your mail again should I need to. Too many people send me email
saying just "device number request" in the subject.

Second, please include a description of the device *in the same format
as this list*. The reason for this is that it is the only way I have
found to ensure I have all the requisite information to publish your
device and avoid conflicts.

Third, please don't assume that the distributed version of the list is
up to date. Due to the number of registrations I have to maintain it
in "batch mode", so there is likely additional registrations that
haven't been listed yet.

Fourth, remember that Linux now has extensive support for dynamic allocation
of device numbering and can use sysfs and udev to handle the naming needs.
There are still some exceptions in the serial and boot device area. Before
asking for a device number make sure you actually need one.

Finally, sometimes I have to play "namespace police." Please don't be
offended. I often get submissions for /dev names that would be bound
to cause conflicts down the road. I am trying to avoid getting in a
situation where we would have to suffer an incompatible forward
change. Therefore, please consult with me *before* you make your
device names and numbers in any way public, at least to the point
where it would be at all difficult to get them changed.

Your cooperation is appreciated.

  0   Unnamed devices (e.g. non-device mounts)
                    0 = reserved as null device number
                  See block major 144, 145, 146 for expansion areas.

  1 char   Memory devices
                    1 = /dev/mem   Physical memory access
                    2 = /dev/kmem   Kernel virtual memory access
                    3 = /dev/null   Null device
                    4 = /dev/port   I/O port access
                    5 = /dev/zero   Null byte source
                    6 = /dev/core   OBSOLETE - replaced by /proc/kcore
                    7 = /dev/full   Returns ENOSPC on write
                    8 = /dev/random   Nondeterministic random number gen.
                    9 = /dev/urandom   Faster, less secure random number gen.
                   10 = /dev/aio   Asynchronous I/O notification interface
                   11 = /dev/kmsg   Writes to this come out as printk's
                   12 = /dev/oldmem   Used by crashdump kernels to access
                                          the memory of the kernel that crashed.

  1 block   RAM disk
                    0 = /dev/ram0   First RAM disk
                    1 = /dev/ram1   Second RAM disk
                    ...
                  250 = /dev/initrd   Initial RAM disk

                  Older kernels had /dev/ramdisk (1, 1) here.
                  /dev/initrd refers to a RAM disk which was preloaded

```
                by the boot loader; newer kernels use /dev/ram0 for
                the initrd.

2 char          Pseudo-TTY masters
                  0 = /dev/ptyp0        First PTY master
                  1 = /dev/ptyp1        Second PTY master
                    ...
                255 = /dev/ptyef        256th PTY master

                Pseudo-tty's are named as follows:
                * Masters are "pty", slaves are "tty";
                * the fourth letter is one of pqrstuvwxyzabcde indicating
                  the 1st through 16th series of 16 pseudo-ttys each, and
                * the fifth letter is one of 0123456789abcdef indicating
                  the position within the series.

                These are the old-style (BSD) PTY devices; Unix98
                devices are on major 128 and above and use the PTY
                master multiplex (/dev/ptmx) to acquire a PTY on
                demand.

2 block         Floppy disks
                  0 = /dev/fd0          Controller 0, drive 0, autodetect
                  1 = /dev/fd1          Controller 0, drive 1, autodetect
                  2 = /dev/fd2          Controller 0, drive 2, autodetect
                  3 = /dev/fd3          Controller 0, drive 3, autodetect
                128 = /dev/fd4          Controller 1, drive 0, autodetect
                129 = /dev/fd5          Controller 1, drive 1, autodetect
                130 = /dev/fd6          Controller 1, drive 2, autodetect
                131 = /dev/fd7          Controller 1, drive 3, autodetect

                To specify format, add to the autodetect device number:
                  0 = /dev/fd?          Autodetect format
                  4 = /dev/fd?d360      5.25"   360K in a 360K  drive(1)
                 20 = /dev/fd?h360      5.25"   360K in a 1200K drive(1)
                 48 = /dev/fd?h410      5.25"   410K in a 1200K drive
                 64 = /dev/fd?h420      5.25"   420K in a 1200K drive
                 24 = /dev/fd?h720      5.25"   720K in a 1200K drive
                 80 = /dev/fd?h880      5.25"   880K in a 1200K drive(1)
                  8 = /dev/fd?h1200     5.25"  1200K in a 1200K drive(1)
                 40 = /dev/fd?h1440     5.25"  1440K in a 1200K drive(1)
                 56 = /dev/fd?h1476     5.25"  1476K in a 1200K drive
                 72 = /dev/fd?h1494     5.25"  1494K in a 1200K drive
                 92 = /dev/fd?h1600     5.25"  1600K in a 1200K drive(1)

                 12 = /dev/fd?u360      3.5"    360K Double Density(2)
                 16 = /dev/fd?u720      3.5"    720K Double Density(1)
                120 = /dev/fd?u800      3.5"    800K Double Density(2)
                 52 = /dev/fd?u820      3.5"    820K Double Density
                 68 = /dev/fd?u830      3.5"    830K Double Density
                 84 = /dev/fd?u1040     3.5"   1040K Double Density(1)
                 88 = /dev/fd?u1120     3.5"   1120K Double Density(1)
                 28 = /dev/fd?u1440     3.5"   1440K High Density(1)
                124 = /dev/fd?u1600     3.5"   1600K High Density(1)
                 44 = /dev/fd?u1680     3.5"   1680K High Density(3)
                 60 = /dev/fd?u1722     3.5"   1722K High Density
```

```
 76 = /dev/fd?u1743    3.5″  1743K High Density
 96 = /dev/fd?u1760    3.5″  1760K High Density
116 = /dev/fd?u1840    3.5″  1840K High Density(3)
100 = /dev/fd?u1920    3.5″  1920K High Density(1)
 32 = /dev/fd?u2880    3.5″  2880K Extra Density(1)
104 = /dev/fd?u3200    3.5″  3200K Extra Density
108 = /dev/fd?u3520    3.5″  3520K Extra Density
112 = /dev/fd?u3840    3.5″  3840K Extra Density(1)

 36 = /dev/fd?CompaQ   Compaq 2880K drive; obsolete?
```

(1) Autodetectable format
(2) Autodetectable format in a Double Density (720K) drive only
(3) Autodetectable format in a High Density (1440K) drive only

NOTE: The letter in the device name (d, q, h or u)
signifies the type of drive: 5.25″ Double Density (d),
5.25″ Quad Density (q), 5.25″ High Density (h) or 3.5″
(any model, u). The use of the capital letters D, H
and E for the 3.5″ models have been deprecated, since
the drive type is insignificant for these devices.

```
 3 char      Pseudo-TTY slaves
               0 = /dev/ttyp0       First PTY slave
               1 = /dev/ttyp1       Second PTY slave
                 ...
             255 = /dev/ttyef       256th PTY slave
```

These are the old-style (BSD) PTY devices; Unix98
devices are on major 136 and above.

```
 3 block     First MFM, RLL and IDE hard disk/CD-ROM interface
               0 = /dev/hda         Master: whole disk (or CD-ROM)
              64 = /dev/hdb         Slave: whole disk (or CD-ROM)

             For partitions, add to the whole disk device number:
               0 = /dev/hd?         Whole disk
               1 = /dev/hd?1        First partition
               2 = /dev/hd?2        Second partition
                 ...
              63 = /dev/hd?63       63rd partition
```

For Linux/i386, partitions 1-4 are the primary
partitions, and 5 and above are logical partitions.
Other versions of Linux use partitioning schemes
appropriate to their respective architectures.

```
 4 char      TTY devices
               0 = /dev/tty0        Current virtual console

               1 = /dev/tty1        First virtual console
                 ...
              63 = /dev/tty63       63rd virtual console
              64 = /dev/ttyS0       First UART serial port
                 ...
             255 = /dev/ttyS191     192nd UART serial port
```

UART serial ports refer to 8250/16450/16550 series devices.

Older versions of the Linux kernel used this major
number for BSD PTY devices. As of Linux 2.1.115, this
is no longer supported. Use major numbers 2 and 3.

 4 block	Aliases for dynamically allocated major devices to be used
		when its not possible to create the real device nodes
		because the root filesystem is mounted read-only.

		  0 = /dev/root

 5 char		Alternate TTY devices
		  0 = /dev/tty		Current TTY device
		  1 = /dev/console	System console
		  2 = /dev/ptmx		PTY master multiplex
		 64 = /dev/cua0		Callout device for ttyS0
		    ...
		255 = /dev/cua191	Callout device for ttyS191

		(5,1) is /dev/console starting with Linux 2.1.71. See
		the section on terminal devices for more information
		on /dev/console.

 6 char		Parallel printer devices
		  0 = /dev/lp0		Parallel printer on parport0
		  1 = /dev/lp1		Parallel printer on parport1
		    ...

		Current Linux kernels no longer have a fixed mapping
		between parallel ports and I/O addresses. Instead,
		they are redirected through the parport multiplex layer.

 7 char		Virtual console capture devices
		  0 = /dev/vcs		Current vc text contents
		  1 = /dev/vcs1		tty1 text contents
		    ...
		 63 = /dev/vcs63	tty63 text contents
		128 = /dev/vcsa		Current vc text/attribute contents
		129 = /dev/vcsa1	tty1 text/attribute contents
		    ...
		191 = /dev/vcsa63	tty63 text/attribute contents

		NOTE: These devices permit both read and write access.

 7 block	Loopback devices
		  0 = /dev/loop0	First loop device
		  1 = /dev/loop1	Second loop device
		    ...

		The loop devices are used to mount filesystems not
		associated with block devices. The binding to the
		loop devices is handled by mount(8) or losetup(8).

 8 block	SCSI disk devices (0-15)

```
    0 = /dev/sda              First SCSI disk whole disk
   16 = /dev/sdb              Second SCSI disk whole disk
   32 = /dev/sdc              Third SCSI disk whole disk
      ...
  240 = /dev/sdp              Sixteenth SCSI disk whole disk
```

Partitions are handled in the same way as for IDE
disks (see major number 3) except that the limit on
partitions is 15.

```
9 char        SCSI tape devices
    0 = /dev/st0              First SCSI tape, mode 0
    1 = /dev/st1              Second SCSI tape, mode 0
      ...
   32 = /dev/st0l             First SCSI tape, mode 1
   33 = /dev/st1l             Second SCSI tape, mode 1
      ...
   64 = /dev/st0m             First SCSI tape, mode 2
   65 = /dev/st1m             Second SCSI tape, mode 2
      ...
   96 = /dev/st0a             First SCSI tape, mode 3
   97 = /dev/st1a             Second SCSI tape, mode 3
      ...
  128 = /dev/nst0             First SCSI tape, mode 0, no rewind
  129 = /dev/nst1             Second SCSI tape, mode 0, no rewind
      ...
  160 = /dev/nst0l            First SCSI tape, mode 1, no rewind
  161 = /dev/nst1l            Second SCSI tape, mode 1, no rewind
      ...
  192 = /dev/nst0m            First SCSI tape, mode 2, no rewind
  193 = /dev/nst1m            Second SCSI tape, mode 2, no rewind
      ...
  224 = /dev/nst0a            First SCSI tape, mode 3, no rewind
  225 = /dev/nst1a            Second SCSI tape, mode 3, no rewind
      ...
```

"No rewind" refers to the omission of the default
automatic rewind on device close. The MTREW or MTOFFL
ioctl()'s can be used to rewind the tape regardless of
the device used to access it.

```
9 block       Metadisk (RAID) devices
    0 = /dev/md0              First metadisk group
    1 = /dev/md1              Second metadisk group
      ...
```

The metadisk driver is used to span a
filesystem across multiple physical disks.

```
10 char       Non-serial mice, misc features
    0 = /dev/logibm           Logitech bus mouse
    1 = /dev/psaux            PS/2-style mouse port
    2 = /dev/inportbm         Microsoft Inport bus mouse
    3 = /dev/atibm            ATI XL bus mouse
    4 = /dev/jbm              J-mouse
    4 = /dev/amigamouse       Amiga mouse (68k/Amiga)
```

devices.txt

```
  5 = /dev/atarimouse    Atari mouse
  6 = /dev/sunmouse      Sun mouse
  7 = /dev/amigamouse1   Second Amiga mouse
  8 = /dev/smouse        Simple serial mouse driver
  9 = /dev/pc110pad      IBM PC-110 digitizer pad
 10 = /dev/adbmouse      Apple Desktop Bus mouse
 11 = /dev/vrtpanel      Vr41xx embedded touch panel
 13 = /dev/vpcmouse      Connectix Virtual PC Mouse
 14 = /dev/touchscreen/ucb1x00  UCB 1x00 touchscreen
 15 = /dev/touchscreen/mk712    MK712 touchscreen
128 = /dev/beep          Fancy beep device
129 =
130 = /dev/watchdog      Watchdog timer port
131 = /dev/temperature   Machine internal temperature
132 = /dev/hwtrap        Hardware fault trap
133 = /dev/exttrp        External device trap
134 = /dev/apm_bios      Advanced Power Management BIOS
135 = /dev/rtc           Real Time Clock
139 = /dev/openprom      SPARC OpenBoot PROM
140 = /dev/relay8        Berkshire Products Octal relay card
141 = /dev/relay16       Berkshire Products ISO-16 relay card
142 =
143 = /dev/pciconf       PCI configuration space
144 = /dev/nvram         Non-volatile configuration RAM
145 = /dev/hfmodem       Soundcard shortwave modem control
146 = /dev/graphics      Linux/SGI graphics device
147 = /dev/opengl        Linux/SGI OpenGL pipe
148 = /dev/gfx           Linux/SGI graphics effects device
149 = /dev/input/mouse   Linux/SGI Irix emulation mouse
150 = /dev/input/keyboard Linux/SGI Irix emulation keyboard
151 = /dev/led           Front panel LEDs
152 = /dev/kpoll         Kernel Poll Driver
153 = /dev/mergemem      Memory merge device
154 = /dev/pmu           Macintosh PowerBook power manager
155 = /dev/isictl        MultiTech ISICom serial control
156 = /dev/lcd           Front panel LCD display
157 = /dev/ac            Applicom Intl Profibus card
158 = /dev/nwbutton      Netwinder external button
159 = /dev/nwdebug       Netwinder debug interface
160 = /dev/nwflash       Netwinder flash memory
161 = /dev/userdma       User-space DMA access
162 = /dev/smbus         System Management Bus
163 = /dev/lik           Logitech Internet Keyboard
164 = /dev/ipmo          Intel Intelligent Platform Management
165 = /dev/vmmon         VMWare virtual machine monitor
166 = /dev/i2o/ctl       I2O configuration manager
167 = /dev/specialix_sxctl Specialix serial control
168 = /dev/tcldrv        Technology Concepts serial control
169 = /dev/specialix_rioctl Specialix RIO serial control
170 = /dev/thinkpad/thinkpad    IBM Thinkpad devices
171 = /dev/srripc        QNX4 API IPC manager
172 = /dev/usemaclone    Semaphore clone device
173 = /dev/ipmikcs       Intelligent Platform Management
174 = /dev/uctrl         SPARCbook 3 microcontroller
175 = /dev/agpgart       AGP Graphics Address Remapping Table
176 = /dev/gtrsc         Gorgy Timing radio clock
```

```
177 = /dev/cbm            Serial CBM bus
178 = /dev/jsflash        JavaStation OS flash SIMM
179 = /dev/xsvc           High-speed shared-mem/semaphore service
180 = /dev/vrbuttons      Vr41xx button input device
181 = /dev/toshiba        Toshiba laptop SMM support
182 = /dev/perfctr        Performance-monitoring counters
183 = /dev/hwrng          Generic random number generator
184 = /dev/cpu/microcode CPU microcode update interface
186 = /dev/atomicps       Atomic shapshot of process state data
187 = /dev/irnet          IrNET device
188 = /dev/smbusbios      SMBus BIOS
189 = /dev/ussp_ctl       User space serial port control
190 = /dev/crash          Mission Critical Linux crash dump
facility
191 = /dev/pcl181         <information missing>
192 = /dev/nas_xbus       NAS xbus LCD/buttons access
193 = /dev/d7s            SPARC 7-segment display
194 = /dev/zkshim         Zero-Knowledge network shim control
195 = /dev/elographics/e2201    Elographics touchscreen
E271-2201
198 = /dev/sexec          Signed executable interface
199 = /dev/scanners/cuecat :CueCat barcode scanner
200 = /dev/net/tun        TAP/TUN network device
201 = /dev/button/gulpb Transmeta GULP-B buttons
202 = /dev/emd/ctl        Enhanced Metadisk RAID (EMD) control
204 = /dev/video/em8300       EM8300 DVD decoder control
205 = /dev/video/em8300_mv    EM8300 DVD decoder video
206 = /dev/video/em8300_ma    EM8300 DVD decoder audio
207 = /dev/video/em8300_sp    EM8300 DVD decoder subpicture
208 = /dev/compaq/cpqphpc     Compaq PCI Hot Plug Controller
209 = /dev/compaq/cpqrid      Compaq Remote Insight Driver
210 = /dev/impi/bt        IMPI coprocessor block transfer
211 = /dev/impi/smic      IMPI coprocessor stream interface
212 = /dev/watchdogs/0  First watchdog device
213 = /dev/watchdogs/1  Second watchdog device
214 = /dev/watchdogs/2  Third watchdog device
215 = /dev/watchdogs/3  Fourth watchdog device
216 = /dev/fujitsu/apanel       Fujitsu/Siemens application
panel
217 = /dev/ni/natmotn           National Instruments Motion
218 = /dev/kchuid         Inter-process chuid control
219 = /dev/modems/mwave MWave modem firmware upload
220 = /dev/mptctl         Message passing technology (MPT) control
221 = /dev/mvista/hssdsi         Montavista PICMG hot swap system
driver
222 = /dev/mvista/hasi           Montavista PICMG high
availability
223 = /dev/input/uinput          User level driver support for
input
224 = /dev/tpm            TCPA TPM driver
225 = /dev/pps            Pulse Per Second driver
226 = /dev/systrace       Systrace device
227 = /dev/mcelog         X86_64 Machine Check Exception driver
228 = /dev/hpet           HPET driver
229 = /dev/fuse           Fuse (virtual filesystem in user-space)
230 = /dev/midishare      MidiShare driver
```

devices.txt

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                231 = /dev/snapshot      System memory snapshot device
                232 = /dev/kvm           Kernel-based virtual machine (hardware
virtualization extensions)
                233 = /dev/kmview        View-OS A process with a view
                234 = /dev/btrfs-control   Btrfs control device
                235 = /dev/autofs        Autofs control device
                240-254                  Reserved for local use
                255                      Reserved for MISC_DYNAMIC_MINOR

 11 char        Raw keyboard device     (Linux/SPARC only)
                  0 = /dev/kbd           Raw keyboard device

 11 char        Serial Mux device       (Linux/PA-RISC only)
                  0 = /dev/ttyB0         First mux port
                  1 = /dev/ttyB1         Second mux port
                    ...

 11 block       SCSI CD-ROM devices
                  0 = /dev/scd0          First SCSI CD-ROM
                  1 = /dev/scd1          Second SCSI CD-ROM
                    ...

                The prefix /dev/sr (instead of /dev/scd) has been deprecated.

 12 char        QIC-02 tape
                  2 = /dev/ntpqic11      QIC-11, no rewind-on-close
                  3 = /dev/tpqic11       QIC-11, rewind-on-close
                  4 = /dev/ntpqic24      QIC-24, no rewind-on-close
                  5 = /dev/tpqic24       QIC-24, rewind-on-close
                  6 = /dev/ntpqic120     QIC-120, no rewind-on-close
                  7 = /dev/tpqic120      QIC-120, rewind-on-close
                  8 = /dev/ntpqic150     QIC-150, no rewind-on-close
                  9 = /dev/tpqic150      QIC-150, rewind-on-close

                The device names specified are proposed -- if there
                are "standard" names for these devices, please let me know.

 12 block

 13 char        Input core
                  0 = /dev/input/js0     First joystick
                  1 = /dev/input/js1     Second joystick
                    ...
                 32 = /dev/input/mouse0  First mouse
                 33 = /dev/input/mouse1  Second mouse
                    ...
                 63 = /dev/input/mice    Unified mouse
                 64 = /dev/input/event0  First event queue
                 65 = /dev/input/event1  Second event queue
                    ...

                Each device type has 5 bits (32 minors).

 13 block       8-bit MFM/RLL/IDE controller
                  0 = /dev/xda           First XT disk whole disk
                 64 = /dev/xdb           Second XT disk whole disk
```

第 9 页

Partitions are handled in the same way as IDE disks
(see major number 3).

```
14 char          Open Sound System (OSS)
                    0 = /dev/mixer         Mixer control
                    1 = /dev/sequencer     Audio sequencer
                    2 = /dev/midi00        First MIDI port
                    3 = /dev/dsp           Digital audio
                    4 = /dev/audio         Sun-compatible digital audio
                    6 =
                    7 = /dev/audioctl      SPARC audio control device
                    8 = /dev/sequencer2    Sequencer -- alternate device
                   16 = /dev/mixer1        Second soundcard mixer control
                   17 = /dev/patmgr0       Sequencer patch manager
                   18 = /dev/midi01        Second MIDI port
                   19 = /dev/dsp1          Second soundcard digital audio
                   20 = /dev/audio1        Second soundcard Sun digital audio
                   33 = /dev/patmgr1       Sequencer patch manager
                   34 = /dev/midi02        Third MIDI port
                   50 = /dev/midi03        Fourth MIDI port

14 block

15 char          Joystick
                    0 = /dev/js0           First analog joystick
                    1 = /dev/js1           Second analog joystick
                      ...
                  128 = /dev/djs0          First digital joystick
                  129 = /dev/djs1          Second digital joystick
                      ...
15 block         Sony CDU-31A/CDU-33A CD-ROM
                    0 = /dev/sonycd        Sony CDU-31a CD-ROM

16 char          Non-SCSI scanners
                    0 = /dev/gs4500        Genius 4500 handheld scanner

16 block         GoldStar CD-ROM
                    0 = /dev/gscd          GoldStar CD-ROM

17 char          OBSOLETE (was Chase serial card)
                    0 = /dev/ttyH0         First Chase port
                    1 = /dev/ttyH1         Second Chase port
                      ...
17 block         Optics Storage CD-ROM
                    0 = /dev/optcd         Optics Storage CD-ROM

18 char          OBSOLETE (was Chase serial card - alternate devices)
                    0 = /dev/cuh0          Callout device for ttyH0
                    1 = /dev/cuh1          Callout device for ttyH1
                      ...
18 block         Sanyo CD-ROM
                    0 = /dev/sjcd          Sanyo CD-ROM

19 char          Cyclades serial card
                    0 = /dev/ttyC0         First Cyclades port
```

```
                          ...
          31 = /dev/ttyC31          32nd Cyclades port

19 block          "Double" compressed disk
           0 = /dev/double0         First compressed disk
                          ...
           7 = /dev/double7         Eighth compressed disk
         128 = /dev/cdouble0        Mirror of first compressed disk
                          ...
         135 = /dev/cdouble7        Mirror of eighth compressed disk

          See the Double documentation for the meaning of the
          mirror devices.

20 char           Cyclades serial card - alternate devices
           0 = /dev/cub0            Callout device for ttyC0
                          ...
          31 = /dev/cub31           Callout device for ttyC31

20 block          Hitachi CD-ROM (under development)
           0 = /dev/hitcd           Hitachi CD-ROM

21 char           Generic SCSI access
           0 = /dev/sg0             First generic SCSI device
           1 = /dev/sg1             Second generic SCSI device
                          ...

          Most distributions name these /dev/sga, /dev/sgb...;
          this sets an unnecessary limit of 26 SCSI devices in
          the system and is counter to standard Linux
          device-naming practice.

21 block          Acorn MFM hard drive interface
           0 = /dev/mfma            First MFM drive whole disk
          64 = /dev/mfmb            Second MFM drive whole disk

          This device is used on the ARM-based Acorn RiscPC.
          Partitions are handled the same way as for IDE disks
          (see major number 3).

22 char           Digiboard serial card
           0 = /dev/ttyD0           First Digiboard port
           1 = /dev/ttyD1           Second Digiboard port
                          ...
22 block          Second IDE hard disk/CD-ROM interface
           0 = /dev/hdc             Master: whole disk (or CD-ROM)
          64 = /dev/hdd             Slave: whole disk (or CD-ROM)

          Partitions are handled the same way as for the first
          interface (see major number 3).

23 char           Digiboard serial card - alternate devices
           0 = /dev/cud0            Callout device for ttyD0
           1 = /dev/cud1            Callout device for ttyD1
                          ...
23 block          Mitsumi proprietary CD-ROM
```

```
                 0 = /dev/mcd            Mitsumi CD-ROM

24 char          Stallion serial card
                 0 = /dev/ttyE0          Stallion port 0 card 0
                 1 = /dev/ttyE1          Stallion port 1 card 0
                   ...
                64 = /dev/ttyE64         Stallion port 0 card 1
                65 = /dev/ttyE65         Stallion port 1 card 1
                   ...
               128 = /dev/ttyE128        Stallion port 0 card 2
               129 = /dev/ttyE129        Stallion port 1 card 2
                   ...
               192 = /dev/ttyE192        Stallion port 0 card 3
               193 = /dev/ttyE193        Stallion port 1 card 3
                   ...
24 block         Sony CDU-535 CD-ROM
                 0 = /dev/cdu535         Sony CDU-535 CD-ROM

25 char          Stallion serial card - alternate devices
                 0 = /dev/cue0           Callout device for ttyE0
                 1 = /dev/cue1           Callout device for ttyE1
                   ...
                64 = /dev/cue64          Callout device for ttyE64
                65 = /dev/cue65          Callout device for ttyE65
                   ...
               128 = /dev/cue128         Callout device for ttyE128
               129 = /dev/cue129         Callout device for ttyE129
                   ...
               192 = /dev/cue192         Callout device for ttyE192
               193 = /dev/cue193         Callout device for ttyE193
                   ...
25 block         First Matsushita (Panasonic/SoundBlaster) CD-ROM
                 0 = /dev/sbpcd0         Panasonic CD-ROM controller 0 unit 0
                 1 = /dev/sbpcd1         Panasonic CD-ROM controller 0 unit 1
                 2 = /dev/sbpcd2         Panasonic CD-ROM controller 0 unit 2
                 3 = /dev/sbpcd3         Panasonic CD-ROM controller 0 unit 3

26 char

26 block         Second Matsushita (Panasonic/SoundBlaster) CD-ROM
                 0 = /dev/sbpcd4         Panasonic CD-ROM controller 1 unit 0
                 1 = /dev/sbpcd5         Panasonic CD-ROM controller 1 unit 1
                 2 = /dev/sbpcd6         Panasonic CD-ROM controller 1 unit 2
                 3 = /dev/sbpcd7         Panasonic CD-ROM controller 1 unit 3

27 char          QIC-117 tape
                 0 = /dev/qft0           Unit 0, rewind-on-close
                 1 = /dev/qft1           Unit 1, rewind-on-close
                 2 = /dev/qft2           Unit 2, rewind-on-close
                 3 = /dev/qft3           Unit 3, rewind-on-close
                 4 = /dev/nqft0          Unit 0, no rewind-on-close
                 5 = /dev/nqft1          Unit 1, no rewind-on-close
                 6 = /dev/nqft2          Unit 2, no rewind-on-close
                 7 = /dev/nqft3          Unit 3, no rewind-on-close
                16 = /dev/zqft0          Unit 0, rewind-on-close, compression
                17 = /dev/zqft1          Unit 1, rewind-on-close, compression
```

```
                      18 = /dev/zqft2        Unit 2, rewind-on-close, compression
                      19 = /dev/zqft3        Unit 3, rewind-on-close, compression
                      20 = /dev/nzqft0       Unit 0, no rewind-on-close, compression
                      21 = /dev/nzqft1       Unit 1, no rewind-on-close, compression
                      22 = /dev/nzqft2       Unit 2, no rewind-on-close, compression
                      23 = /dev/nzqft3       Unit 3, no rewind-on-close, compression
                      32 = /dev/rawqft0      Unit 0, rewind-on-close, no file marks
                      33 = /dev/rawqft1      Unit 1, rewind-on-close, no file marks
                      34 = /dev/rawqft2      Unit 2, rewind-on-close, no file marks
                      35 = /dev/rawqft3      Unit 3, rewind-on-close, no file marks
                      36 = /dev/nrawqft0     Unit 0, no rewind-on-close, no file
marks
                      37 = /dev/nrawqft1     Unit 1, no rewind-on-close, no file
marks
                      38 = /dev/nrawqft2     Unit 2, no rewind-on-close, no file
marks
                      39 = /dev/nrawqft3     Unit 3, no rewind-on-close, no file
marks

  27 block           Third Matsushita (Panasonic/SoundBlaster) CD-ROM
                       0 = /dev/sbpcd8       Panasonic CD-ROM controller 2 unit 0
                       1 = /dev/sbpcd9       Panasonic CD-ROM controller 2 unit 1
                       2 = /dev/sbpcd10      Panasonic CD-ROM controller 2 unit 2
                       3 = /dev/sbpcd11      Panasonic CD-ROM controller 2 unit 3

  28 char            Stallion serial card - card programming
                       0 = /dev/staliomem0   First Stallion card I/O memory
                       1 = /dev/staliomem1   Second Stallion card I/O memory
                       2 = /dev/staliomem2   Third Stallion card I/O memory
                       3 = /dev/staliomem3   Fourth Stallion card I/O memory

  28 char            Atari SLM ACSI laser printer (68k/Atari)
                       0 = /dev/slm0         First SLM laser printer
                       1 = /dev/slm1         Second SLM laser printer
                       ...
  28 block           Fourth Matsushita (Panasonic/SoundBlaster) CD-ROM
                       0 = /dev/sbpcd12      Panasonic CD-ROM controller 3 unit 0
                       1 = /dev/sbpcd13      Panasonic CD-ROM controller 3 unit 1
                       2 = /dev/sbpcd14      Panasonic CD-ROM controller 3 unit 2
                       3 = /dev/sbpcd15      Panasonic CD-ROM controller 3 unit 3

  28 block           ACSI disk (68k/Atari)
                       0 = /dev/ada          First ACSI disk whole disk
                      16 = /dev/adb          Second ACSI disk whole disk
                      32 = /dev/adc          Third ACSI disk whole disk
                       ...
                     240 = /dev/adp          16th ACSI disk whole disk

                     Partitions are handled in the same way as for IDE
                     disks (see major number 3) except that the limit on
                     partitions is 15, like SCSI.

  29 char            Universal frame buffer
                       0 = /dev/fb0          First frame buffer
                       1 = /dev/fb1          Second frame buffer
                       ...
```

devices.txt
```
                     31 = /dev/fb31            32nd frame buffer

 29 block        Aztech/Orchid/Okano/Wearnes CD-ROM
                      0 = /dev/aztcd           Aztech CD-ROM

 30 char         iBCS-2 compatibility devices
                      0 = /dev/socksys         Socket access
                      1 = /dev/spx             SVR3 local X interface
                     32 = /dev/inet/ip         Network access
                     33 = /dev/inet/icmp
                     34 = /dev/inet/ggp
                     35 = /dev/inet/ipip
                     36 = /dev/inet/tcp
                     37 = /dev/inet/egp
                     38 = /dev/inet/pup
                     39 = /dev/inet/udp
                     40 = /dev/inet/idp
                     41 = /dev/inet/rawip

                 Additionally, iBCS-2 requires the following links:

                 /dev/ip -> /dev/inet/ip
                 /dev/icmp -> /dev/inet/icmp
                 /dev/ggp -> /dev/inet/ggp
                 /dev/ipip -> /dev/inet/ipip
                 /dev/tcp -> /dev/inet/tcp
                 /dev/egp -> /dev/inet/egp
                 /dev/pup -> /dev/inet/pup
                 /dev/udp -> /dev/inet/udp
                 /dev/idp -> /dev/inet/idp
                 /dev/rawip -> /dev/inet/rawip
                 /dev/inet/arp -> /dev/inet/udp
                 /dev/inet/rip -> /dev/inet/udp
                 /dev/nfsd -> /dev/socksys
                 /dev/XOR -> /dev/null (? apparently not required ?)

 30 block        Philips LMS CM-205 CD-ROM
                      0 = /dev/cm205cd         Philips LMS CM-205 CD-ROM

                 /dev/lmscd is an older name for this device.  This
                 driver does not work with the CM-205MS CD-ROM.

 31 char         MPU-401 MIDI
                      0 = /dev/mpu401data      MPU-401 data port
                      1 = /dev/mpu401stat      MPU-401 status port

 31 block        ROM/flash memory card
                      0 = /dev/rom0            First ROM card (rw)
                      ...
                      7 = /dev/rom7            Eighth ROM card (rw)
                      8 = /dev/rrom0           First ROM card (ro)
                      ...
                     15 = /dev/rrom7           Eighth ROM card (ro)
                     16 = /dev/flash0          First flash memory card (rw)
                      ...
                     23 = /dev/flash7          Eighth flash memory card (rw)
```

```
                 24 = /dev/rflash0        First flash memory card (ro)
                 ...
                 31 = /dev/rflash7        Eighth flash memory card (ro)

              The read-write (rw) devices support back-caching
              written data in RAM, as well as writing to flash RAM
              devices.  The read-only devices (ro) support reading
              only.

 32 char     Specialix serial card
                  0 = /dev/ttyX0          First Specialix port
                  1 = /dev/ttyX1          Second Specialix port
                 ...
 32 block    Philips LMS CM-206 CD-ROM
                  0 = /dev/cm206cd        Philips LMS CM-206 CD-ROM

 33 char     Specialix serial card - alternate devices
                  0 = /dev/cux0           Callout device for ttyX0
                  1 = /dev/cux1           Callout device for ttyX1
                 ...
 33 block    Third IDE hard disk/CD-ROM interface
                  0 = /dev/hde            Master: whole disk (or CD-ROM)
                 64 = /dev/hdf            Slave: whole disk (or CD-ROM)

              Partitions are handled the same way as for the first
              interface (see major number 3).

 34 char     Z8530 HDLC driver
                  0 = /dev/scc0           First Z8530, first port
                  1 = /dev/scc1           First Z8530, second port
                  2 = /dev/scc2           Second Z8530, first port
                  3 = /dev/scc3           Second Z8530, second port
                 ...

              In a previous version these devices were named
              /dev/sc1 for /dev/scc0, /dev/sc2 for /dev/scc1, and so
              on.

 34 block    Fourth IDE hard disk/CD-ROM interface
                  0 = /dev/hdg            Master: whole disk (or CD-ROM)
                 64 = /dev/hdh            Slave: whole disk (or CD-ROM)

              Partitions are handled the same way as for the first
              interface (see major number 3).

 35 char     tclmidi MIDI driver
                  0 = /dev/midi0          First MIDI port, kernel timed
                  1 = /dev/midi1          Second MIDI port, kernel timed
                  2 = /dev/midi2          Third MIDI port, kernel timed
                  3 = /dev/midi3          Fourth MIDI port, kernel timed
                 64 = /dev/rmidi0         First MIDI port, untimed
                 65 = /dev/rmidi1         Second MIDI port, untimed
                 66 = /dev/rmidi2         Third MIDI port, untimed
                 67 = /dev/rmidi3         Fourth MIDI port, untimed
                128 = /dev/smpte0         First MIDI port, SMPTE timed
                129 = /dev/smpte1         Second MIDI port, SMPTE timed
```

```
                 130 = /dev/smpte2        Third MIDI port, SMPTE timed
                 131 = /dev/smpte3        Fourth MIDI port, SMPTE timed

 35 block       Slow memory ramdisk
                   0 = /dev/slram         Slow memory ramdisk

 36 char        Netlink support
                   0 = /dev/route         Routing, device updates, kernel to user
                   1 = /dev/skip          enSKIP security cache control
                   3 = /dev/fwmonitor     Firewall packet copies
                  16 = /dev/tap0          First Ethertap device
                  ...
                  31 = /dev/tap15         16th Ethertap device

 36 block       MCA ESDI hard disk
                   0 = /dev/eda           First ESDI disk whole disk
                  64 = /dev/edb           Second ESDI disk whole disk
                  ...

                Partitions are handled in the same way as IDE disks
                (see major number 3).

 37 char        IDE tape
                   0 = /dev/ht0           First IDE tape
                   1 = /dev/ht1           Second IDE tape
                  ...
                 128 = /dev/nht0          First IDE tape, no rewind-on-close
                 129 = /dev/nht1          Second IDE tape, no rewind-on-close
                  ...

                Currently, only one IDE tape drive is supported.

 37 block       Zorro II ramdisk
                   0 = /dev/z2ram         Zorro II ramdisk

 38 char        Myricom PCI Myrinet board
                   0 = /dev/mlanai0       First Myrinet board
                   1 = /dev/mlanai1       Second Myrinet board
                  ...

                This device is used for status query, board control
                and "user level packet I/O."  This board is also
                accessible as a standard networking "eth" device.

 38 block       OBSOLETE (was Linux/AP+)

 39 char        ML-16P experimental I/O board
                   0 = /dev/ml16pa-a0     First card, first analog channel
                   1 = /dev/ml16pa-a1     First card, second analog channel
                  ...
                  15 = /dev/ml16pa-a15    First card, 16th analog channel
                  16 = /dev/ml16pa-d      First card, digital lines
                  17 = /dev/ml16pa-c0     First card, first counter/timer
                  18 = /dev/ml16pa-c1     First card, second counter/timer
                  19 = /dev/ml16pa-c2     First card, third counter/timer
                  32 = /dev/ml16pb-a0     Second card, first analog channel
```

```
                33 = /dev/ml16pb-a1    Second card, second analog channel
                ...
                47 = /dev/ml16pb-a15   Second card, 16th analog channel
                48 = /dev/ml16pb-d     Second card, digital lines
                49 = /dev/ml16pb-c0    Second card, first counter/timer
                50 = /dev/ml16pb-c1    Second card, second counter/timer
                51 = /dev/ml16pb-c2    Second card, third counter/timer
                ...
39 block

40 char

40 block

41 char      Yet Another Micro Monitor
                 0 = /dev/yamm         Yet Another Micro Monitor

41 block

42 char      Demo/sample use

42 block     Demo/sample use

             This number is intended for use in sample code, as
             well as a general "example" device number.  It
             should never be used for a device driver that is being
             distributed; either obtain an official number or use
             the local/experimental range.  The sudden addition or
             removal of a driver with this number should not cause
             ill effects to the system (bugs excepted.)

             IN PARTICULAR, ANY DISTRIBUTION WHICH CONTAINS A
             DEVICE DRIVER USING MAJOR NUMBER 42 IS NONCOMPLIANT.

43 char      isdn4linux virtual modem
                 0 = /dev/ttyI0        First virtual modem
                 ...
                63 = /dev/ttyI63       64th virtual modem

43 block     Network block devices
                 0 = /dev/nb0          First network block device
                 1 = /dev/nb1          Second network block device
                 ...

             Network Block Device is somehow similar to loopback
             devices: If you read from it, it sends packet across
             network asking server for data. If you write to it, it
             sends packet telling server to write. It could be used
             to mounting filesystems over the net, swapping over
             the net, implementing block device in userland etc.

44 char      isdn4linux virtual modem - alternate devices
                 0 = /dev/cui0         Callout device for ttyI0
                 ...
                63 = /dev/cui63        Callout device for ttyI63
```

```
44 block      Flash Translation Layer (FTL) filesystems
                0 = /dev/ftla          FTL on first Memory Technology Device
               16 = /dev/ftlb          FTL on second Memory Technology Device
               32 = /dev/ftlc          FTL on third Memory Technology Device
                 ...
              240 = /dev/ftlp          FTL on 16th Memory Technology Device

              Partitions are handled in the same way as for IDE
              disks (see major number 3) except that the partition
              limit is 15 rather than 63 per disk (same as SCSI.)

45 char       isdn4linux ISDN BRI driver
                0 = /dev/isdn0         First virtual B channel raw data
                 ...
               63 = /dev/isdn63        64th virtual B channel raw data
               64 = /dev/isdnctrl0     First channel control/debug
                 ...
              127 = /dev/isdnctrl63    64th channel control/debug

              128 = /dev/ippp0         First SyncPPP device
                 ...
              191 = /dev/ippp63        64th SyncPPP device

              255 = /dev/isdninfo      ISDN monitor interface

45 block      Parallel port IDE disk devices
                0 = /dev/pda           First parallel port IDE disk
               16 = /dev/pdb           Second parallel port IDE disk
               32 = /dev/pdc           Third parallel port IDE disk
               48 = /dev/pdd           Fourth parallel port IDE disk

              Partitions are handled in the same way as for IDE
              disks (see major number 3) except that the partition
              limit is 15 rather than 63 per disk.

46 char       Comtrol Rocketport serial card
                0 = /dev/ttyR0         First Rocketport port
                1 = /dev/ttyR1         Second Rocketport port
                 ...
46 block      Parallel port ATAPI CD-ROM devices
                0 = /dev/pcd0          First parallel port ATAPI CD-ROM
                1 = /dev/pcd1          Second parallel port ATAPI CD-ROM
                2 = /dev/pcd2          Third parallel port ATAPI CD-ROM
                3 = /dev/pcd3          Fourth parallel port ATAPI CD-ROM

47 char       Comtrol Rocketport serial card - alternate devices
                0 = /dev/cur0          Callout device for ttyR0
                1 = /dev/cur1          Callout device for ttyR1
                 ...
47 block      Parallel port ATAPI disk devices
                0 = /dev/pf0           First parallel port ATAPI disk
                1 = /dev/pf1           Second parallel port ATAPI disk
                2 = /dev/pf2           Third parallel port ATAPI disk
                3 = /dev/pf3           Fourth parallel port ATAPI disk

              This driver is intended for floppy disks and similar
```

devices and hence does not support partitioning.

```
48 char          SDL RISCom serial card
                   0 = /dev/ttyL0          First RISCom port
                   1 = /dev/ttyL1          Second RISCom port
                   ...
48 block         Mylex DAC960 PCI RAID controller; first controller
                   0 = /dev/rd/c0d0        First disk, whole disk
                   8 = /dev/rd/c0d1        Second disk, whole disk
                   ...
                 248 = /dev/rd/c0d31       32nd disk, whole disk

                 For partitions add:
                   0 = /dev/rd/c?d?        Whole disk
                   1 = /dev/rd/c?d?p1      First partition
                   ...
                   7 = /dev/rd/c?d?p7      Seventh partition

49 char          SDL RISCom serial card - alternate devices
                   0 = /dev/cul0           Callout device for ttyL0
                   1 = /dev/cul1           Callout device for ttyL1
                   ...
49 block         Mylex DAC960 PCI RAID controller; second controller
                   0 = /dev/rd/c1d0        First disk, whole disk
                   8 = /dev/rd/c1d1        Second disk, whole disk
                   ...
                 248 = /dev/rd/c1d31       32nd disk, whole disk

                 Partitions are handled as for major 48.

50 char          Reserved for GLINT

50 block         Mylex DAC960 PCI RAID controller; third controller
                   0 = /dev/rd/c2d0        First disk, whole disk
                   8 = /dev/rd/c2d1        Second disk, whole disk
                   ...
                 248 = /dev/rd/c2d31       32nd disk, whole disk

51 char          Baycom radio modem OR Radio Tech BIM-XXX-RS232 radio modem
                   0 = /dev/bc0            First Baycom radio modem
                   1 = /dev/bc1            Second Baycom radio modem
                   ...
51 block         Mylex DAC960 PCI RAID controller; fourth controller
                   0 = /dev/rd/c3d0        First disk, whole disk
                   8 = /dev/rd/c3d1        Second disk, whole disk
                   ...
                 248 = /dev/rd/c3d31       32nd disk, whole disk

                 Partitions are handled as for major 48.

52 char          Spellcaster DataComm/BRI ISDN card
                   0 = /dev/dcbri0         First DataComm card
                   1 = /dev/dcbri1         Second DataComm card
                   2 = /dev/dcbri2         Third DataComm card
                   3 = /dev/dcbri3         Fourth DataComm card
```

```
52 block      Mylex DAC960 PCI RAID controller; fifth controller
                0 = /dev/rd/c4d0      First disk, whole disk
                8 = /dev/rd/c4d1      Second disk, whole disk
                  ...
              248 = /dev/rd/c4d31     32nd disk, whole disk

              Partitions are handled as for major 48.

53 char       BDM interface for remote debugging MC683xx microcontrollers
                0 = /dev/pd_bdm0      PD BDM interface on lp0
                1 = /dev/pd_bdm1      PD BDM interface on lp1
                2 = /dev/pd_bdm2      PD BDM interface on lp2
                4 = /dev/icd_bdm0     ICD BDM interface on lp0
                5 = /dev/icd_bdm1     ICD BDM interface on lp1
                6 = /dev/icd_bdm2     ICD BDM interface on lp2

              This device is used for the interfacing to the MC683xx
              microcontrollers via Background Debug Mode by use of a
              Parallel Port interface. PD is the Motorola Public
              Domain Interface and ICD is the commercial interface
              by P&E.

53 block      Mylex DAC960 PCI RAID controller; sixth controller
                0 = /dev/rd/c5d0      First disk, whole disk
                8 = /dev/rd/c5d1      Second disk, whole disk
                  ...
              248 = /dev/rd/c5d31     32nd disk, whole disk

              Partitions are handled as for major 48.

54 char       Electrocardiognosis Holter serial card
                0 = /dev/holter0      First Holter port
                1 = /dev/holter1      Second Holter port
                2 = /dev/holter2      Third Holter port

              A custom serial card used by Electrocardiognosis SRL
              <mseritan@ottonel.pub.ro> to transfer data from Holter
              24-hour heart monitoring equipment.

54 block      Mylex DAC960 PCI RAID controller; seventh controller
                0 = /dev/rd/c6d0      First disk, whole disk
                8 = /dev/rd/c6d1      Second disk, whole disk
                  ...
              248 = /dev/rd/c6d31     32nd disk, whole disk

              Partitions are handled as for major 48.

55 char       DSP56001 digital signal processor
                0 = /dev/dsp56k       First DSP56001

55 block      Mylex DAC960 PCI RAID controller; eighth controller
                0 = /dev/rd/c7d0      First disk, whole disk
                8 = /dev/rd/c7d1      Second disk, whole disk
                  ...
              248 = /dev/rd/c7d31     32nd disk, whole disk
```

Partitions are handled as for major 48.

56 char   Apple Desktop Bus
     0 = /dev/adb   ADB bus control

     Additional devices will be added to this number, all
     starting with /dev/adb.

56 block   Fifth IDE hard disk/CD-ROM interface
     0 = /dev/hdi   Master: whole disk (or CD-ROM)
    64 = /dev/hdj   Slave: whole disk (or CD-ROM)

     Partitions are handled the same way as for the first
     interface (see major number 3).

57 char   Hayes ESP serial card
     0 = /dev/ttyP0   First ESP port
     1 = /dev/ttyP1   Second ESP port
      ...

57 block   Sixth IDE hard disk/CD-ROM interface
     0 = /dev/hdk   Master: whole disk (or CD-ROM)
    64 = /dev/hdl   Slave: whole disk (or CD-ROM)

     Partitions are handled the same way as for the first
     interface (see major number 3).

58 char   Hayes ESP serial card - alternate devices
     0 = /dev/cup0   Callout device for ttyP0
     1 = /dev/cup1   Callout device for ttyP1
      ...

58 block   Reserved for logical volume manager

59 char   sf firewall package
     0 = /dev/firewall Communication with sf kernel module

59 block   Generic PDA filesystem device
     0 = /dev/pda0   First PDA device
     1 = /dev/pda1   Second PDA device
      ...

     The pda devices are used to mount filesystems on
     remote pda's (basically slow handheld machines with
     proprietary OS's and limited memory and storage
     running small fs translation drivers) through serial /
     IRDA / parallel links.

     NAMING CONFLICT -- PROPOSED REVISED NAME /dev/rpda0 etc

60-63 char LOCAL/EXPERIMENTAL USE

60-63 block LOCAL/EXPERIMENTAL USE
     Allocated for local/experimental use. For devices not
     assigned official numbers, these ranges should be
     used in order to avoid conflicting with future assignments.

```
64 char          ENskip kernel encryption package
                   0 = /dev/enskip        Communication with ENskip kernel module

64 block         Scramdisk/DriveCrypt encrypted devices
                   0 = /dev/scramdisk/master   Master node for ioctls
                   1 = /dev/scramdisk/1        First encrypted device
                   2 = /dev/scramdisk/2        Second encrypted device
                   ...
                 255 = /dev/scramdisk/255      255th encrypted device

                 The filename of the encrypted container and the passwords
                 are sent via ioctls (using the sdmount tool) to the master
                 node which then activates them via one of the
                 /dev/scramdisk/x nodes for loop mounting (all handled
                 through the sdmount tool).

                 Requested by: andy@scramdisklinux.org

65 char          Sundance "plink" Transputer boards (obsolete, unused)
                   0 = /dev/plink0        First plink device
                   1 = /dev/plink1        Second plink device
                   2 = /dev/plink2        Third plink device
                   3 = /dev/plink3        Fourth plink device
                  64 = /dev/rplink0       First plink device, raw
                  65 = /dev/rplink1       Second plink device, raw
                  66 = /dev/rplink2       Third plink device, raw
                  67 = /dev/rplink3       Fourth plink device, raw
                 128 = /dev/plink0d       First plink device, debug
                 129 = /dev/plink1d       Second plink device, debug
                 130 = /dev/plink2d       Third plink device, debug
                 131 = /dev/plink3d       Fourth plink device, debug
                 192 = /dev/rplink0d      First plink device, raw, debug
                 193 = /dev/rplink1d      Second plink device, raw, debug
                 194 = /dev/rplink2d      Third plink device, raw, debug
                 195 = /dev/rplink3d      Fourth plink device, raw, debug

                 This is a commercial driver; contact James Howes
                 <jth@prosig.demon.co.uk> for information.

65 block         SCSI disk devices (16-31)
                   0 = /dev/sdq           17th SCSI disk whole disk
                  16 = /dev/sdr           18th SCSI disk whole disk
                  32 = /dev/sds           19th SCSI disk whole disk
                   ...
                 240 = /dev/sdaf          32nd SCSI disk whole disk

                 Partitions are handled in the same way as for IDE
                 disks (see major number 3) except that the limit on
                 partitions is 15.

66 char          YARC PowerPC PCI coprocessor card
                   0 = /dev/yppcpci0      First YARC card
                   1 = /dev/yppcpci1      Second YARC card
                   ...
```

```
66 block      SCSI disk devices (32-47)
                0 = /dev/sdag           33th SCSI disk whole disk
               16 = /dev/sdah           34th SCSI disk whole disk
               32 = /dev/sdai           35th SCSI disk whole disk
                 ...
              240 = /dev/sdav           48nd SCSI disk whole disk

              Partitions are handled in the same way as for IDE
              disks (see major number 3) except that the limit on
              partitions is 15.

67 char       Coda network file system
                0 = /dev/cfs0           Coda cache manager

              See http://www.coda.cs.cmu.edu for information about Coda.

67 block      SCSI disk devices (48-63)
                0 = /dev/sdaw           49th SCSI disk whole disk
               16 = /dev/sdax           50th SCSI disk whole disk
               32 = /dev/sday           51st SCSI disk whole disk
                 ...
              240 = /dev/sdbl           64th SCSI disk whole disk

              Partitions are handled in the same way as for IDE
              disks (see major number 3) except that the limit on
              partitions is 15.

68 char       CAPI 2.0 interface
                0 = /dev/capi20         Control device
                1 = /dev/capi20.00      First CAPI 2.0 application
                2 = /dev/capi20.01      Second CAPI 2.0 application
                 ...
               20 = /dev/capi20.19      19th CAPI 2.0 application

              ISDN CAPI 2.0 driver for use with CAPI 2.0
              applications; currently supports the AVM B1 card.

68 block      SCSI disk devices (64-79)
                0 = /dev/sdbm           65th SCSI disk whole disk
               16 = /dev/sdbn           66th SCSI disk whole disk
               32 = /dev/sdbo           67th SCSI disk whole disk
                 ...
              240 = /dev/sdcb           80th SCSI disk whole disk

              Partitions are handled in the same way as for IDE
              disks (see major number 3) except that the limit on
              partitions is 15.

69 char       MA16 numeric accelerator card
                0 = /dev/ma16           Board memory access

69 block      SCSI disk devices (80-95)
                0 = /dev/sdcc           81st SCSI disk whole disk
               16 = /dev/sdcd           82nd SCSI disk whole disk
               32 = /dev/sdce           83th SCSI disk whole disk
                 ...
```

```
          240 = /dev/sdcr           96th SCSI disk whole disk

          Partitions are handled in the same way as for IDE
          disks (see major number 3) except that the limit on
          partitions is 15.

 70 char   SpellCaster Protocol Services Interface
            0 = /dev/apscfg         Configuration interface
            1 = /dev/apsauth        Authentication interface
            2 = /dev/apslog         Logging interface
            3 = /dev/apsdbg         Debugging interface
           64 = /dev/apsisdn        ISDN command interface
           65 = /dev/apsasync       Async command interface
          128 = /dev/apsmon         Monitor interface

 70 block  SCSI disk devices (96-111)
            0 = /dev/sdcs           97th SCSI disk whole disk
           16 = /dev/sdct           98th SCSI disk whole disk
           32 = /dev/sdcu           99th SCSI disk whole disk
            ...
          240 = /dev/sddh           112nd SCSI disk whole disk

          Partitions are handled in the same way as for IDE
          disks (see major number 3) except that the limit on
          partitions is 15.

 71 char   Computone IntelliPort II serial card
            0 = /dev/ttyF0          IntelliPort II board 0, port 0
            1 = /dev/ttyF1          IntelliPort II board 0, port 1
            ...
           63 = /dev/ttyF63         IntelliPort II board 0, port 63
           64 = /dev/ttyF64         IntelliPort II board 1, port 0
           65 = /dev/ttyF65         IntelliPort II board 1, port 1
            ...
          127 = /dev/ttyF127        IntelliPort II board 1, port 63
          128 = /dev/ttyF128        IntelliPort II board 2, port 0
          129 = /dev/ttyF129        IntelliPort II board 2, port 1
            ...
          191 = /dev/ttyF191        IntelliPort II board 2, port 63
          192 = /dev/ttyF192        IntelliPort II board 3, port 0
          193 = /dev/ttyF193        IntelliPort II board 3, port 1
            ...
          255 = /dev/ttyF255        IntelliPort II board 3, port 63

 71 block  SCSI disk devices (112-127)
            0 = /dev/sddi           113th SCSI disk whole disk
           16 = /dev/sddj           114th SCSI disk whole disk
           32 = /dev/sddk           115th SCSI disk whole disk
            ...
          240 = /dev/sddx           128th SCSI disk whole disk

          Partitions are handled in the same way as for IDE
          disks (see major number 3) except that the limit on
          partitions is 15.

 72 char   Computone IntelliPort II serial card - alternate devices
```

```
          0 = /dev/cuf0          Callout device for ttyF0
          1 = /dev/cuf1          Callout device for ttyF1
            ...
         63 = /dev/cuf63         Callout device for ttyF63
         64 = /dev/cuf64         Callout device for ttyF64
         65 = /dev/cuf65         Callout device for ttyF65
            ...
        127 = /dev/cuf127        Callout device for ttyF127
        128 = /dev/cuf128        Callout device for ttyF128
        129 = /dev/cuf129        Callout device for ttyF129
            ...
        191 = /dev/cuf191        Callout device for ttyF191
        192 = /dev/cuf192        Callout device for ttyF192
        193 = /dev/cuf193        Callout device for ttyF193
            ...
        255 = /dev/cuf255        Callout device for ttyF255

 72 block      Compaq Intelligent Drive Array, first controller
          0 = /dev/ida/c0d0      First logical drive whole disk
         16 = /dev/ida/c0d1      Second logical drive whole disk
            ...
        240 = /dev/ida/c0d15     16th logical drive whole disk

               Partitions are handled the same way as for Mylex
               DAC960 (see major number 48) except that the limit on
               partitions is 15.

 73 char       Computone IntelliPort II serial card - control devices
          0 = /dev/ip2ipl0       Loadware device for board 0
          1 = /dev/ip2stat0      Status device for board 0
          4 = /dev/ip2ipl1       Loadware device for board 1
          5 = /dev/ip2stat1      Status device for board 1
          8 = /dev/ip2ipl2       Loadware device for board 2
          9 = /dev/ip2stat2      Status device for board 2
         12 = /dev/ip2ipl3       Loadware device for board 3
         13 = /dev/ip2stat3      Status device for board 3

 73 block      Compaq Intelligent Drive Array, second controller
          0 = /dev/ida/c1d0      First logical drive whole disk
         16 = /dev/ida/c1d1      Second logical drive whole disk
            ...
        240 = /dev/ida/c1d15     16th logical drive whole disk

               Partitions are handled the same way as for Mylex
               DAC960 (see major number 48) except that the limit on
               partitions is 15.

 74 char       SCI bridge
          0 = /dev/SCI/0         SCI device 0
          1 = /dev/SCI/1         SCI device 1
            ...

               Currently for Dolphin Interconnect Solutions' PCI-SCI
               bridge.

 74 block      Compaq Intelligent Drive Array, third controller
```

```
               0 = /dev/ida/c2d0      First logical drive whole disk
              16 = /dev/ida/c2d1      Second logical drive whole disk
                 ...
             240 = /dev/ida/c2d15     16th logical drive whole disk

             Partitions are handled the same way as for Mylex
             DAC960 (see major number 48) except that the limit on
             partitions is 15.

75 char      Specialix IO8+ serial card
               0 = /dev/ttyW0         First IO8+ port, first card
               1 = /dev/ttyW1         Second IO8+ port, first card
                 ...
               8 = /dev/ttyW8         First IO8+ port, second card
                 ...

75 block     Compaq Intelligent Drive Array, fourth controller
               0 = /dev/ida/c3d0      First logical drive whole disk
              16 = /dev/ida/c3d1      Second logical drive whole disk
                 ...
             240 = /dev/ida/c3d15     16th logical drive whole disk

             Partitions are handled the same way as for Mylex
             DAC960 (see major number 48) except that the limit on
             partitions is 15.

76 char      Specialix IO8+ serial card - alternate devices
               0 = /dev/cuw0          Callout device for ttyW0
               1 = /dev/cuw1          Callout device for ttyW1
                 ...
               8 = /dev/cuw8          Callout device for ttyW8
                 ...

76 block     Compaq Intelligent Drive Array, fifth controller
               0 = /dev/ida/c4d0      First logical drive whole disk
              16 = /dev/ida/c4d1      Second logical drive whole disk
                 ...
             240 = /dev/ida/c4d15     16th logical drive whole disk

             Partitions are handled the same way as for Mylex
             DAC960 (see major number 48) except that the limit on
             partitions is 15.


77 char      ComScire Quantum Noise Generator
               0 = /dev/qng           ComScire Quantum Noise Generator

77 block     Compaq Intelligent Drive Array, sixth controller
               0 = /dev/ida/c5d0      First logical drive whole disk
              16 = /dev/ida/c5d1      Second logical drive whole disk
                 ...
             240 = /dev/ida/c5d15     16th logical drive whole disk

             Partitions are handled the same way as for Mylex
             DAC960 (see major number 48) except that the limit on
             partitions is 15.
```

```
78 char          PAM Software's multimodem boards
                   0 = /dev/ttyM0        First PAM modem
                   1 = /dev/ttyM1        Second PAM modem
                     ...

78 block         Compaq Intelligent Drive Array, seventh controller
                   0 = /dev/ida/c6d0     First logical drive whole disk
                  16 = /dev/ida/c6d1     Second logical drive whole disk
                     ...
                 240 = /dev/ida/c6d15    16th logical drive whole disk

                 Partitions are handled the same way as for Mylex
                 DAC960 (see major number 48) except that the limit on
                 partitions is 15.

79 char          PAM Software's multimodem boards - alternate devices
                   0 = /dev/cum0         Callout device for ttyM0
                   1 = /dev/cum1         Callout device for ttyM1
                     ...

79 block         Compaq Intelligent Drive Array, eighth controller
                   0 = /dev/ida/c7d0     First logical drive whole disk
                  16 = /dev/ida/c7d1     Second logical drive whole disk
                     ...
                 240 = /dev/ida/c715     16th logical drive whole disk

                 Partitions are handled the same way as for Mylex
                 DAC960 (see major number 48) except that the limit on
                 partitions is 15.

80 char          Photometrics AT200 CCD camera
                   0 = /dev/at200        Photometrics AT200 CCD camera

80 block         I2O hard disk
                   0 = /dev/i2o/hda      First I2O hard disk, whole disk
                  16 = /dev/i2o/hdb      Second I2O hard disk, whole disk
                     ...
                 240 = /dev/i2o/hdp      16th I2O hard disk, whole disk

                 Partitions are handled in the same way as for IDE
                 disks (see major number 3) except that the limit on
                 partitions is 15.

81 char          video4linux
                   0 = /dev/video0       Video capture/overlay device
                     ...
                  63 = /dev/video63      Video capture/overlay device
                  64 = /dev/radio0       Radio device
                     ...
                 127 = /dev/radio63      Radio device
                 192 = /dev/vtx0         Teletext device
                     ...
                 223 = /dev/vtx31        Teletext device
                 224 = /dev/vbi0         Vertical blank interrupt
                     ...
```

```
                                 255 = /dev/vbi31          Vertical blank interrupt

81 block        I2O hard disk
                  0 = /dev/i2o/hdq        17th I2O hard disk, whole disk
                 16 = /dev/i2o/hdr        18th I2O hard disk, whole disk
                    ...
                240 = /dev/i2o/hdaf       32nd I2O hard disk, whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

82 char         WiNRADiO communications receiver card
                  0 = /dev/winradio0     First WiNRADiO card
                  1 = /dev/winradio1     Second WiNRADiO card
                    ...

                The driver and documentation may be obtained from
                http://www.proximity.com.au/~brian/winradio/

82 block        I2O hard disk
                  0 = /dev/i2o/hdag       33rd I2O hard disk, whole disk
                 16 = /dev/i2o/hdah       34th I2O hard disk, whole disk
                    ...
                240 = /dev/i2o/hdav       48th I2O hard disk, whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

83 char         Matrox mga_vid video driver
                  0 = /dev/mga_vid0      1st video card
                  1 = /dev/mga_vid1      2nd video card
                  2 = /dev/mga_vid2      3rd video card
                    ...
                 15 = /dev/mga_vid15     16th video card

83 block        I2O hard disk
                  0 = /dev/i2o/hdaw       49th I2O hard disk, whole disk
                 16 = /dev/i2o/hdax       50th I2O hard disk, whole disk
                    ...
                240 = /dev/i2o/hdbl       64th I2O hard disk, whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

84 char         Ikon 1011[57] Versatec Greensheet Interface
                  0 = /dev/ihcp0          First Greensheet port
                  1 = /dev/ihcp1          Second Greensheet port

84 block        I2O hard disk
                  0 = /dev/i2o/hdbm       65th I2O hard disk, whole disk
                 16 = /dev/i2o/hdbn       66th I2O hard disk, whole disk
                    ...
                240 = /dev/i2o/hdcb       80th I2O hard disk, whole disk
```

```
                   Partitions are handled in the same way as for IDE
                   disks (see major number 3) except that the limit on
                   partitions is 15.

85 char            Linux/SGI shared memory input queue
                     0 = /dev/shmiq          Master shared input queue
                     1 = /dev/qcntl0         First device pushed
                     2 = /dev/qcntl1         Second device pushed
                       ...

85 block           I2O hard disk
                     0 = /dev/i2o/hdcc       81st I2O hard disk, whole disk
                    16 = /dev/i2o/hdcd       82nd I2O hard disk, whole disk
                       ...
                   240 = /dev/i2o/hdcr       96th I2O hard disk, whole disk

                   Partitions are handled in the same way as for IDE
                   disks (see major number 3) except that the limit on
                   partitions is 15.

86 char            SCSI media changer
                     0 = /dev/sch0           First SCSI media changer
                     1 = /dev/sch1           Second SCSI media changer
                       ...

86 block           I2O hard disk
                     0 = /dev/i2o/hdcs       97th I2O hard disk, whole disk
                    16 = /dev/i2o/hdct       98th I2O hard disk, whole disk
                       ...
                   240 = /dev/i2o/hddh       112th I2O hard disk, whole disk

                   Partitions are handled in the same way as for IDE
                   disks (see major number 3) except that the limit on
                   partitions is 15.

87 char            Sony Control-A1 stereo control bus
                     0 = /dev/controla0      First device on chain
                     1 = /dev/controla1      Second device on chain
                       ...

87 block           I2O hard disk
                     0 = /dev/i2o/hddi       113rd I2O hard disk, whole disk
                    16 = /dev/i2o/hddj       114th I2O hard disk, whole disk
                       ...
                   240 = /dev/i2o/hddx       128th I2O hard disk, whole disk

                   Partitions are handled in the same way as for IDE
                   disks (see major number 3) except that the limit on
                   partitions is 15.

88 char            COMX synchronous serial card
                     0 = /dev/comx0          COMX channel 0
                     1 = /dev/comx1          COMX channel 1
                       ...
```

```
88 block          Seventh IDE hard disk/CD-ROM interface
                    0 = /dev/hdm          Master: whole disk (or CD-ROM)
                   64 = /dev/hdn          Slave: whole disk (or CD-ROM)

                  Partitions are handled the same way as for the first
                  interface (see major number 3).

89 char           I2C bus interface
                    0 = /dev/i2c-0        First I2C adapter
                    1 = /dev/i2c-1        Second I2C adapter
                      ...

89 block          Eighth IDE hard disk/CD-ROM interface
                    0 = /dev/hdo          Master: whole disk (or CD-ROM)
                   64 = /dev/hdp          Slave: whole disk (or CD-ROM)

                  Partitions are handled the same way as for the first
                  interface (see major number 3).

90 char           Memory Technology Device (RAM, ROM, Flash)
                    0 = /dev/mtd0         First MTD (rw)
                    1 = /dev/mtdr0        First MTD (ro)
                      ...
                   30 = /dev/mtd15        16th MTD (rw)
                   31 = /dev/mtdr15       16th MTD (ro)

90 block          Ninth IDE hard disk/CD-ROM interface
                    0 = /dev/hdq          Master: whole disk (or CD-ROM)
                   64 = /dev/hdr          Slave: whole disk (or CD-ROM)

                  Partitions are handled the same way as for the first
                  interface (see major number 3).

91 char           CAN-Bus devices
                    0 = /dev/can0         First CAN-Bus controller
                    1 = /dev/can1         Second CAN-Bus controller
                      ...

91 block          Tenth IDE hard disk/CD-ROM interface
                    0 = /dev/hds          Master: whole disk (or CD-ROM)
                   64 = /dev/hdt          Slave: whole disk (or CD-ROM)

                  Partitions are handled the same way as for the first
                  interface (see major number 3).

92 char           Reserved for ith Kommunikationstechnik MIC ISDN card

92 block          PPDD encrypted disk driver
                    0 = /dev/ppdd0        First encrypted disk
                    1 = /dev/ppdd1        Second encrypted disk
                      ...

                  Partitions are handled in the same way as for IDE
                  disks (see major number 3) except that the limit on
                  partitions is 15.
```

```
93 char

93 block          NAND Flash Translation Layer filesystem
                    0 = /dev/nftla           First NFTL layer
                   16 = /dev/nftlb           Second NFTL layer
                      ...
                  240 = /dev/nftlp           16th NTFL layer

94 char

94 block          IBM S/390 DASD block storage
                    0 = /dev/dasda First DASD device, major
                    1 = /dev/dasda1 First DASD device, block 1
                    2 = /dev/dasda2 First DASD device, block 2
                    3 = /dev/dasda3 First DASD device, block 3
                    4 = /dev/dasdb Second DASD device, major
                    5 = /dev/dasdb1 Second DASD device, block 1
                    6 = /dev/dasdb2 Second DASD device, block 2
                    7 = /dev/dasdb3 Second DASD device, block 3
                      ...

95 char           IP filter
                    0 = /dev/ipl             Filter control device/log file
                    1 = /dev/ipnat           NAT control device/log file
                    2 = /dev/ipstate         State information log file
                    3 = /dev/ipauth          Authentication control device/log file
                      ...

96 char           Parallel port ATAPI tape devices
                    0 = /dev/pt0             First parallel port ATAPI tape
                    1 = /dev/pt1             Second parallel port ATAPI tape
                      ...
                  128 = /dev/npt0            First p.p. ATAPI tape, no rewind
                  129 = /dev/npt1            Second p.p. ATAPI tape, no rewind
                      ...

96 block          Inverse NAND Flash Translation Layer
                    0 = /dev/inftla First INFTL layer
                   16 = /dev/inftlb Second INFTL layer
                      ...
                  240 = /dev/inftlp          16th INTFL layer

97 char           Parallel port generic ATAPI interface
                    0 = /dev/pg0             First parallel port ATAPI device
                    1 = /dev/pg1             Second parallel port ATAPI device
                    2 = /dev/pg2             Third parallel port ATAPI device
                    3 = /dev/pg3             Fourth parallel port ATAPI device

                  These devices support the same API as the generic SCSI
                  devices.

98 char           Control and Measurement Device (comedi)
                    0 = /dev/comedi0         First comedi device
                    1 = /dev/comedi1         Second comedi device
                      ...
```

devices.txt

See http://stm.lbl.gov/comedi or http://www.llp.fu-berlin.de/.

```
 98 block       User-mode virtual block device
                   0 = /dev/ubda          First user-mode block device
                  16 = /dev/udbb          Second user-mode block device
                   ...

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

                This device is used by the user-mode virtual kernel port.

 99 char        Raw parallel ports
                   0 = /dev/parport0      First parallel port
                   1 = /dev/parport1      Second parallel port
                   ...

 99 block       JavaStation flash disk
                   0 = /dev/jsfd          JavaStation flash disk

100 char        Telephony for Linux
                   0 = /dev/phone0        First telephony device
                   1 = /dev/phone1        Second telephony device
                   ...

101 char        Motorola DSP 56xxx board
                   0 = /dev/mdspstat      Status information
                   1 = /dev/mdsp1         First DSP board I/O controls
                   ...
                  16 = /dev/mdsp16        16th DSP board I/O controls

101 block       AMI HyperDisk RAID controller
                   0 = /dev/amiraid/ar0  First array whole disk
                  16 = /dev/amiraid/ar1  Second array whole disk
                   ...
                 240 = /dev/amiraid/ar15 16th array whole disk

                For each device, partitions are added as:
                   0 = /dev/amiraid/ar?    Whole disk
                   1 = /dev/amiraid/ar?p1  First partition
                   2 = /dev/amiraid/ar?p2  Second partition
                   ...
                  15 = /dev/amiraid/ar?p15 15th partition

102 char

102 block       Compressed block device
                   0 = /dev/cbd/a         First compressed block device, whole
device
                  16 = /dev/cbd/b         Second compressed block device, whole
device
                   ...
                 240 = /dev/cbd/p         16th compressed block device, whole
device
```

```
                 Partitions are handled in the same way as for IDE
                 disks (see major number 3) except that the limit on
                 partitions is 15.

103 char         Arla network file system
                   0 = /dev/nnpfs0       First NNPFS device
                   1 = /dev/nnpfs1       Second NNPFS device

                 Arla is a free clone of the Andrew File System, AFS.
                 The NNPFS device gives user mode filesystem
                 implementations a kernel presence for caching and easy
                 mounting.  For more information about the project,
                 write to <arla-drinkers@stacken.kth.se> or see
                 http://www.stacken.kth.se/project/arla/

103 block        Audit device
                   0 = /dev/audit        Audit device

104 char         Flash BIOS support

104 block        Compaq Next Generation Drive Array, first controller
                   0 = /dev/cciss/c0d0   First logical drive, whole disk
                  16 = /dev/cciss/c0d1   Second logical drive, whole disk
                   ...
                 240 = /dev/cciss/c0d15  16th logical drive, whole disk

                 Partitions are handled the same way as for Mylex
                 DAC960 (see major number 48) except that the limit on
                 partitions is 15.

105 char         Comtrol VS-1000 serial controller
                   0 = /dev/ttyV0        First VS-1000 port
                   1 = /dev/ttyV1        Second VS-1000 port
                   ...

105 block        Compaq Next Generation Drive Array, second controller
                   0 = /dev/cciss/c1d0   First logical drive, whole disk
                  16 = /dev/cciss/c1d1   Second logical drive, whole disk
                   ...
                 240 = /dev/cciss/c1d15  16th logical drive, whole disk

                 Partitions are handled the same way as for Mylex
                 DAC960 (see major number 48) except that the limit on
                 partitions is 15.

106 char         Comtrol VS-1000 serial controller - alternate devices
                   0 = /dev/cuv0         First VS-1000 port
                   1 = /dev/cuv1         Second VS-1000 port
                   ...

106 block        Compaq Next Generation Drive Array, third controller
                   0 = /dev/cciss/c2d0   First logical drive, whole disk
                  16 = /dev/cciss/c2d1   Second logical drive, whole disk
                   ...
                 240 = /dev/cciss/c2d15  16th logical drive, whole disk
```

```
                   Partitions are handled the same way as for Mylex
                   DAC960 (see major number 48) except that the limit on
                   partitions is 15.

107 char           3Dfx Voodoo Graphics device
                      0 = /dev/3dfx            Primary 3Dfx graphics device

107 block          Compaq Next Generation Drive Array, fourth controller
                      0 = /dev/cciss/c3d0   First logical drive, whole disk
                     16 = /dev/cciss/c3d1   Second logical drive, whole disk
                      ...
                    240 = /dev/cciss/c3d15  16th logical drive, whole disk

                   Partitions are handled the same way as for Mylex
                   DAC960 (see major number 48) except that the limit on
                   partitions is 15.

108 char           Device independent PPP interface
                      0 = /dev/ppp             Device independent PPP interface

108 block          Compaq Next Generation Drive Array, fifth controller
                      0 = /dev/cciss/c4d0   First logical drive, whole disk
                     16 = /dev/cciss/c4d1   Second logical drive, whole disk
                      ...
                    240 = /dev/cciss/c4d15  16th logical drive, whole disk

                   Partitions are handled the same way as for Mylex
                   DAC960 (see major number 48) except that the limit on
                   partitions is 15.

109 char           Reserved for logical volume manager

109 block          Compaq Next Generation Drive Array, sixth controller
                      0 = /dev/cciss/c5d0   First logical drive, whole disk
                     16 = /dev/cciss/c5d1   Second logical drive, whole disk
                      ...
                    240 = /dev/cciss/c5d15  16th logical drive, whole disk

                   Partitions are handled the same way as for Mylex
                   DAC960 (see major number 48) except that the limit on
                   partitions is 15.

110 char           miroMEDIA Surround board
                      0 = /dev/srnd0           First miroMEDIA Surround board
                      1 = /dev/srnd1           Second miroMEDIA Surround board
                      ...

110 block          Compaq Next Generation Drive Array, seventh controller
                      0 = /dev/cciss/c6d0   First logical drive, whole disk
                     16 = /dev/cciss/c6d1   Second logical drive, whole disk
                      ...
                    240 = /dev/cciss/c6d15  16th logical drive, whole disk

                   Partitions are handled the same way as for Mylex
                   DAC960 (see major number 48) except that the limit on
                   partitions is 15.
```

```
111 char

111 block          Compaq Next Generation Drive Array, eighth controller
                     0 = /dev/cciss/c7d0   First logical drive, whole disk
                    16 = /dev/cciss/c7d1   Second logical drive, whole disk
                      ...
                   240 = /dev/cciss/c7d15  16th logical drive, whole disk

                   Partitions are handled the same way as for Mylex
                   DAC960 (see major number 48) except that the limit on
                   partitions is 15.

112 char           ISI serial card
                     0 = /dev/ttyM0        First ISI port
                     1 = /dev/ttyM1        Second ISI port
                      ...

                   There is currently a device-naming conflict between
                   these and PAM multimodems (major 78).

112 block          IBM iSeries virtual disk
                     0 = /dev/iseries/vda  First virtual disk, whole disk
                     8 = /dev/iseries/vdb  Second virtual disk, whole disk
                      ...
                   200 = /dev/iseries/vdz  26th virtual disk, whole disk
                   208 = /dev/iseries/vdaa 27th virtual disk, whole disk
                      ...
                   248 = /dev/iseries/vdaf 32nd virtual disk, whole disk

                   Partitions are handled in the same way as for IDE
                   disks (see major number 3) except that the limit on
                   partitions is 7.

113 char           ISI serial card - alternate devices
                     0 = /dev/cum0         Callout device for ttyM0
                     1 = /dev/cum1         Callout device for ttyM1
                      ...

113 block          IBM iSeries virtual CD-ROM
                     0 = /dev/iseries/vcda First virtual CD-ROM
                     1 = /dev/iseries/vcdb Second virtual CD-ROM
                      ...

114 char           Picture Elements ISE board
                     0 = /dev/ise0         First ISE board
                     1 = /dev/ise1         Second ISE board
                      ...
                   128 = /dev/isex0        Control node for first ISE board
                   129 = /dev/isex1        Control node for second ISE board
                      ...

                   The ISE board is an embedded computer, optimized for
                   image processing. The /dev/iseN nodes are the general
                   I/O access to the board, the /dev/isex0 nodes command
                   nodes used to control the board.
```

```
114 block       IDE BIOS powered software RAID interfaces such as the
                Promise Fastrak

                  0 = /dev/ataraid/d0
                  1 = /dev/ataraid/d0p1
                  2 = /dev/ataraid/d0p2
                  ...
                 16 = /dev/ataraid/d1
                 17 = /dev/ataraid/d1p1
                 18 = /dev/ataraid/d1p2
                  ...
                255 = /dev/ataraid/d15p15

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

115 char        TI link cable devices (115 was formerly the console driver
speaker)
                  0 = /dev/tipar0    Parallel cable on first parallel port
                  ...
                  7 = /dev/tipar7    Parallel cable on seventh parallel port

                  8 = /dev/tiser0    Serial cable on first serial port
                  ...
                 15 = /dev/tiser7    Serial cable on seventh serial port

                 16 = /dev/tiusb0    First USB cable
                  ...
                 47 = /dev/tiusb31   32nd USB cable

115 block       NetWare (NWFS) Devices (0-255)

                The NWFS (NetWare) devices are used to present a
                collection of NetWare Mirror Groups or NetWare
                Partitions as a logical storage segment for
                use in mounting NetWare volumes.  A maximum of
                256 NetWare volumes can be supported in a single
                machine.

                http://www.kernel.org/pub/linux/kernel/people/jmerkey/nwfs

                0 = /dev/nwfs/v0    First NetWare (NWFS) Logical Volume
                1 = /dev/nwfs/v1    Second NetWare (NWFS) Logical Volume
                2 = /dev/nwfs/v2    Third NetWare (NWFS) Logical Volume
                   ...
                255 = /dev/nwfs/v255    Last NetWare (NWFS) Logical Volume

116 char        Advanced Linux Sound Driver (ALSA)

116 block       MicroMemory battery backed RAM adapter (NVRAM)
                Supports 16 boards, 15 partitions each.
                Requested by neilb at cse.unsw.edu.au.

                  0 = /dev/umem/d0       Whole of first board
```

```
     1 = /dev/umem/d0p1     First partition of first board
     2 = /dev/umem/d0p2     Second partition of first board
    15 = /dev/umem/d0p15    15th partition of first board

    16 = /dev/umem/d1       Whole of second board
    17 = /dev/umem/d1p1     First partition of second board
       ...
   255= /dev/umem/d15p15   15th partition of 16th board.

117 char        COSA/SRP synchronous serial card
     0 = /dev/cosa0c0      1st board, 1st channel
     1 = /dev/cosa0c1      1st board, 2nd channel
       ...
    16 = /dev/cosa1c0      2nd board, 1st channel
    17 = /dev/cosa1c1      2nd board, 2nd channel
       ...

117 block       Enterprise Volume Management System (EVMS)
```

117 block   Enterprise Volume Management System (EVMS)

The EVMS driver uses a layered, plug-in model to provide
unparalleled flexibility and extensibility in managing
storage. This allows for easy expansion or customization
of various levels of volume management. Requested by
Mark Peloquin (peloquin at us.ibm.com).

Note: EVMS populates and manages all the devnodes in
/dev/evms.

http://sf.net/projects/evms

```
     0 = /dev/evms/block_device   EVMS block device
     1 = /dev/evms/legacyname1    First EVMS legacy device
     2 = /dev/evms/legacyname2    Second EVMS legacy device
       ...
       Both ranges can grow (down or up) until they meet.
       ...
   254 = /dev/evms/EVMSname2      Second EVMS native device
   255 = /dev/evms/EVMSname1      First EVMS native device
```

Note: legacyname(s) are derived from the normal legacy
device names. For example, /dev/hda5 would become
/dev/evms/hda5.

```
118 char        IBM Cryptographic Accelerator
     0 = /dev/ica  Virtual interface to all IBM Crypto Accelerators
     1 = /dev/ica0 IBMCA Device 0
     2 = /dev/ica1 IBMCA Device 1
       ...

119 char        VMware virtual network control
     0 = /dev/vnet0         1st virtual network
     1 = /dev/vnet1         2nd virtual network
       ...

120-127 char    LOCAL/EXPERIMENTAL USE
```

```
120-127 block   LOCAL/EXPERIMENTAL USE
                Allocated for local/experimental use.  For devices not
                assigned official numbers, these ranges should be
                used in order to avoid conflicting with future assignments.

128-135 char    Unix98 PTY masters

                These devices should not have corresponding device
                nodes; instead they should be accessed through the
                /dev/ptmx cloning interface.

128 block       SCSI disk devices (128-143)
                   0 = /dev/sddy          129th SCSI disk whole disk
                  16 = /dev/sddz          130th SCSI disk whole disk
                  32 = /dev/sdea          131th SCSI disk whole disk
                  ...
                 240 = /dev/sden          144th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

129 block       SCSI disk devices (144-159)
                   0 = /dev/sdeo          145th SCSI disk whole disk
                  16 = /dev/sdep          146th SCSI disk whole disk
                  32 = /dev/sdeq          147th SCSI disk whole disk
                  ...
                 240 = /dev/sdfd          160th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

130 char        (Misc devices)

130 block       SCSI disk devices (160-175)
                   0 = /dev/sdfe          161st SCSI disk whole disk
                  16 = /dev/sdff          162nd SCSI disk whole disk
                  32 = /dev/sdfg          163rd SCSI disk whole disk
                  ...
                 240 = /dev/sdft          176th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

131 block       SCSI disk devices (176-191)
                   0 = /dev/sdfu          177th SCSI disk whole disk
                  16 = /dev/sdfv          178th SCSI disk whole disk
                  32 = /dev/sdfw          179th SCSI disk whole disk
                  ...
                 240 = /dev/sdgj          192nd SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.
```

```
132 block       SCSI disk devices (192-207)
                  0 = /dev/sdgk          193rd SCSI disk whole disk
                 16 = /dev/sdgl          194th SCSI disk whole disk
                 32 = /dev/sdgm          195th SCSI disk whole disk
                  ...
                240 = /dev/sdgz          208th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

133 block       SCSI disk devices (208-223)
                  0 = /dev/sdha          209th SCSI disk whole disk
                 16 = /dev/sdhb          210th SCSI disk whole disk
                 32 = /dev/sdhc          211th SCSI disk whole disk
                  ...
                240 = /dev/sdhp          224th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

134 block       SCSI disk devices (224-239)
                  0 = /dev/sdhq          225th SCSI disk whole disk
                 16 = /dev/sdhr          226th SCSI disk whole disk
                 32 = /dev/sdhs          227th SCSI disk whole disk
                  ...
                240 = /dev/sdif          240th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

135 block       SCSI disk devices (240-255)
                  0 = /dev/sdig          241st SCSI disk whole disk
                 16 = /dev/sdih          242nd SCSI disk whole disk
                 32 = /dev/sdih          243rd SCSI disk whole disk
                  ...
                240 = /dev/sdiv          256th SCSI disk whole disk

                Partitions are handled in the same way as for IDE
                disks (see major number 3) except that the limit on
                partitions is 15.

136-143 char    Unix98 PTY slaves
                  0 = /dev/pts/0         First Unix98 pseudo-TTY
                  1 = /dev/pts/1         Second Unix98 pseudo-TTY
                  ...

                These device nodes are automatically generated with
                the proper permissions and modes by mounting the
                devpts filesystem onto /dev/pts with the appropriate
                mount options (distribution dependent, however, on
                *most* distributions the appropriate options are
                "mode=0620,gid=<gid of the "tty" group>".)
```

```
136 block          Mylex DAC960 PCI RAID controller; ninth controller
                     0 = /dev/rd/c8d0      First disk, whole disk
                     8 = /dev/rd/c8d1      Second disk, whole disk
                     ...
                   248 = /dev/rd/c8d31     32nd disk, whole disk

                   Partitions are handled as for major 48.

137 block          Mylex DAC960 PCI RAID controller; tenth controller
                     0 = /dev/rd/c9d0      First disk, whole disk
                     8 = /dev/rd/c9d1      Second disk, whole disk
                     ...
                   248 = /dev/rd/c9d31     32nd disk, whole disk

                   Partitions are handled as for major 48.

138 block          Mylex DAC960 PCI RAID controller; eleventh controller
                     0 = /dev/rd/c10d0     First disk, whole disk
                     8 = /dev/rd/c10d1     Second disk, whole disk
                     ...
                   248 = /dev/rd/c10d31    32nd disk, whole disk

                   Partitions are handled as for major 48.

139 block          Mylex DAC960 PCI RAID controller; twelfth controller
                     0 = /dev/rd/c11d0     First disk, whole disk
                     8 = /dev/rd/c11d1     Second disk, whole disk
                     ...
                   248 = /dev/rd/c11d31    32nd disk, whole disk

                   Partitions are handled as for major 48.

140 block          Mylex DAC960 PCI RAID controller; thirteenth controller
                     0 = /dev/rd/c12d0     First disk, whole disk
                     8 = /dev/rd/c12d1     Second disk, whole disk
                     ...
                   248 = /dev/rd/c12d31    32nd disk, whole disk

                   Partitions are handled as for major 48.

141 block          Mylex DAC960 PCI RAID controller; fourteenth controller
                     0 = /dev/rd/c13d0     First disk, whole disk
                     8 = /dev/rd/c13d1     Second disk, whole disk
                     ...
                   248 = /dev/rd/c13d31    32nd disk, whole disk

                   Partitions are handled as for major 48.

142 block          Mylex DAC960 PCI RAID controller; fifteenth controller
                     0 = /dev/rd/c14d0     First disk, whole disk
                     8 = /dev/rd/c14d1     Second disk, whole disk
                     ...
                   248 = /dev/rd/c14d31    32nd disk, whole disk

                   Partitions are handled as for major 48.
```

```
143 block          Mylex DAC960 PCI RAID controller; sixteenth controller
                      0 = /dev/rd/c15d0     First disk, whole disk
                      8 = /dev/rd/c15d1     Second disk, whole disk
                      ...
                    248 = /dev/rd/c15d31    32nd disk, whole disk

                   Partitions are handled as for major 48.

144 char           Encapsulated PPP
                      0 = /dev/pppox0       First PPP over Ethernet
                      ...
                     63 = /dev/pppox63      64th PPP over Ethernet

                   This is primarily used for ADSL.

                   The SST 5136-DN DeviceNet interface driver has been
                   relocated to major 183 due to an unfortunate conflict.

144 block          Expansion Area #1 for more non-device (e.g. NFS) mounts
                      0 = mounted device 256
                    255 = mounted device 511

145 char           SAM9407-based soundcard
                      0 = /dev/sam0_mixer
                      1 = /dev/sam0_sequencer
                      2 = /dev/sam0_midi00
                      3 = /dev/sam0_dsp
                      4 = /dev/sam0_audio
                      6 = /dev/sam0_sndstat
                     18 = /dev/sam0_midi01
                     34 = /dev/sam0_midi02
                     50 = /dev/sam0_midi03
                     64 = /dev/sam1_mixer
                      ...
                    128 = /dev/sam2_mixer
                      ...
                    192 = /dev/sam3_mixer
                      ...

                   Device functions match OSS, but offer a number of
                   addons, which are sam9407 specific.  OSS can be
                   operated simultaneously, taking care of the codec.

145 block          Expansion Area #2 for more non-device (e.g. NFS) mounts
                      0 = mounted device 512
                    255 = mounted device 767

146 char           SYSTRAM SCRAMNet mirrored-memory network
                      0 = /dev/scramnet0    First SCRAMNet device
                      1 = /dev/scramnet1    Second SCRAMNet device
                      ...

146 block          Expansion Area #3 for more non-device (e.g. NFS) mounts
                      0 = mounted device 768
                    255 = mounted device 1023
```

```
147 char         Aureal Semiconductor Vortex Audio device
                   0 = /dev/aureal0      First Aureal Vortex
                   1 = /dev/aureal1      Second Aureal Vortex
                   ...

147 block        Distributed Replicated Block Device (DRBD)
                   0 = /dev/drbd0        First DRBD device
                   1 = /dev/drbd1        Second DRBD device
                   ...

148 char         Technology Concepts serial card
                   0 = /dev/ttyT0        First TCL port
                   1 = /dev/ttyT1        Second TCL port
                   ...

149 char         Technology Concepts serial card - alternate devices
                   0 = /dev/cut0         Callout device for ttyT0
                   1 = /dev/cut0         Callout device for ttyT1
                   ...

150 char         Real-Time Linux FIFOs
                   0 = /dev/rtf0         First RTLinux FIFO
                   1 = /dev/rtf1         Second RTLinux FIFO
                   ...

151 char         DPT I2O SmartRaid V controller
                   0 = /dev/dpti0        First DPT I2O adapter
                   1 = /dev/dpti1        Second DPT I2O adapter
                   ...

152 char         EtherDrive Control Device
                   0 = /dev/etherd/ctl   Connect/Disconnect an EtherDrive
                   1 = /dev/etherd/err   Monitor errors
                   2 = /dev/etherd/raw   Raw AoE packet monitor

152 block        EtherDrive Block Devices
                   0 = /dev/etherd/0     EtherDrive 0
                   ...
                 255 = /dev/etherd/255   EtherDrive 255

153 char         SPI Bus Interface (sometimes referred to as MicroWire)
                   0 = /dev/spi0         First SPI device on the bus
                   1 = /dev/spi1         Second SPI device on the bus
                   ...
                  15 = /dev/spi15        Sixteenth SPI device on the bus

153 block        Enhanced Metadisk RAID (EMD) storage units
                   0 = /dev/emd/0        First unit
                   1 = /dev/emd/0p1      Partition 1 on First unit
                   2 = /dev/emd/0p2      Partition 2 on First unit
                   ...
                  15 = /dev/emd/0p15     Partition 15 on First unit

                  16 = /dev/emd/1        Second unit
                  32 = /dev/emd/2        Third unit
```

```
                             ...
                     240 = /dev/emd/15         Sixteenth unit

                     Partitions are handled in the same way as for IDE
                     disks (see major number 3) except that the limit on
                     partitions is 15.

154 char         Specialix RIO serial card
                       0 = /dev/ttySR0         First RIO port
                             ...
                     255 = /dev/ttySR255       256th RIO port

155 char         Specialix RIO serial card – alternate devices
                       0 = /dev/cusr0          Callout device for ttySR0
                             ...
                     255 = /dev/cusr255        Callout device for ttySR255

156 char         Specialix RIO serial card
                       0 = /dev/ttySR256       257th RIO port
                             ...
                     255 = /dev/ttySR511       512th RIO port

157 char         Specialix RIO serial card – alternate devices
                       0 = /dev/cusr256        Callout device for ttySR256
                             ...
                     255 = /dev/cusr511        Callout device for ttySR511

158 char         Dialogic GammaLink fax driver
                       0 = /dev/gfax0          GammaLink channel 0
                       1 = /dev/gfax1          GammaLink channel 1
                             ...

159 char         RESERVED

159 block        RESERVED

160 char         General Purpose Instrument Bus (GPIB)
                       0 = /dev/gpib0          First GPIB bus
                       1 = /dev/gpib1          Second GPIB bus
                             ...

160 block        Carmel 8-port SATA Disks on First Controller
                       0 = /dev/carmel/0       SATA disk 0 whole disk
                       1 = /dev/carmel/0p1     SATA disk 0 partition 1
                             ...
                      31 = /dev/carmel/0p31    SATA disk 0 partition 31

                      32 = /dev/carmel/1       SATA disk 1 whole disk
                      64 = /dev/carmel/2       SATA disk 2 whole disk
                             ...
                     224 = /dev/carmel/7       SATA disk 7 whole disk

                     Partitions are handled in the same way as for IDE
                     disks (see major number 3) except that the limit on
                     partitions is 31.
```

```
161 char          IrCOMM devices (IrDA serial/parallel emulation)
                    0 = /dev/ircomm0      First IrCOMM device
                    1 = /dev/ircomm1      Second IrCOMM device
                      ...
                   16 = /dev/irlpt0       First IrLPT device
                   17 = /dev/irlpt1       Second IrLPT device
                      ...

161 block         Carmel 8-port SATA Disks on Second Controller
                    0 = /dev/carmel/8     SATA disk 8 whole disk
                    1 = /dev/carmel/8p1   SATA disk 8 partition 1
                      ...
                   31 = /dev/carmel/8p31  SATA disk 8 partition 31

                   32 = /dev/carmel/9     SATA disk 9 whole disk
                   64 = /dev/carmel/10    SATA disk 10 whole disk
                      ...
                  224 = /dev/carmel/15    SATA disk 15 whole disk

                  Partitions are handled in the same way as for IDE
                  disks (see major number 3) except that the limit on
                  partitions is 31.

162 char          Raw block device interface
                    0 = /dev/rawctl       Raw I/O control device
                    1 = /dev/raw/raw1     First raw I/O device
                    2 = /dev/raw/raw2     Second raw I/O device
                      ...

163 char

164 char          Chase Research AT/PCI-Fast serial card
                    0 = /dev/ttyCH0       AT/PCI-Fast board 0, port 0
                      ...
                   15 = /dev/ttyCH15      AT/PCI-Fast board 0, port 15
                   16 = /dev/ttyCH16      AT/PCI-Fast board 1, port 0
                      ...
                   31 = /dev/ttyCH31      AT/PCI-Fast board 1, port 15
                   32 = /dev/ttyCH32      AT/PCI-Fast board 2, port 0
                      ...
                   47 = /dev/ttyCH47      AT/PCI-Fast board 2, port 15
                   48 = /dev/ttyCH48      AT/PCI-Fast board 3, port 0
                      ...
                   63 = /dev/ttyCH63      AT/PCI-Fast board 3, port 15

165 char          Chase Research AT/PCI-Fast serial card - alternate devices
                    0 = /dev/cuch0        Callout device for ttyCH0
                      ...
                   63 = /dev/cuch63       Callout device for ttyCH63

166 char          ACM USB modems
                    0 = /dev/ttyACM0      First ACM modem
                    1 = /dev/ttyACM1      Second ACM modem
                      ...

167 char          ACM USB modems - alternate devices
```

```
             0 = /dev/cuacm0      Callout device for ttyACM0
             1 = /dev/cuacm1      Callout device for ttyACM1
               ...

168 char       Eracom CSA7000 PCI encryption adaptor
             0 = /dev/ecsa0        First CSA7000
             1 = /dev/ecsa1        Second CSA7000
               ...

169 char       Eracom CSA8000 PCI encryption adaptor
             0 = /dev/ecsa8-0      First CSA8000
             1 = /dev/ecsa8-1      Second CSA8000
               ...

170 char       AMI MegaRAC remote access controller
             0 = /dev/megarac0     First MegaRAC card
             1 = /dev/megarac1     Second MegaRAC card
               ...

171 char       Reserved for IEEE 1394 (Firewire)

172 char       Moxa Intellio serial card
             0 = /dev/ttyMX0       First Moxa port
             1 = /dev/ttyMX1       Second Moxa port
               ...
           127 = /dev/ttyMX127     128th Moxa port
           128 = /dev/moxactl      Moxa control port

173 char       Moxa Intellio serial card - alternate devices
             0 = /dev/cumx0        Callout device for ttyMX0
             1 = /dev/cumx1        Callout device for ttyMX1
               ...
           127 = /dev/cumx127      Callout device for ttyMX127

174 char       SmartIO serial card
             0 = /dev/ttySI0       First SmartIO port
             1 = /dev/ttySI1       Second SmartIO port
               ...

175 char       SmartIO serial card - alternate devices
             0 = /dev/cusi0        Callout device for ttySI0
             1 = /dev/cusi1        Callout device for ttySI1
               ...

176 char       nCipher nFast PCI crypto accelerator
             0 = /dev/nfastpci0    First nFast PCI device
             1 = /dev/nfastpci1    First nFast PCI device
               ...

177 char       TI PCILynx memory spaces
             0 = /dev/pcilynx/aux0  AUX space of first PCILynx card
               ...
            15 = /dev/pcilynx/aux15 AUX space of 16th PCILynx card
            16 = /dev/pcilynx/rom0  ROM space of first PCILynx card
               ...
            31 = /dev/pcilynx/rom15 ROM space of 16th PCILynx card
```

```
                    32 = /dev/pcilynx/ram0  RAM space of first PCILynx card
                       ...
                    47 = /dev/pcilynx/ram15 RAM space of 16th PCILynx card

 178 char         Giganet cLAN1xxx virtual interface adapter
                     0 = /dev/clanvi0      First cLAN adapter
                     1 = /dev/clanvi1      Second cLAN adapter
                       ...

 179 block        MMC block devices
                     0 = /dev/mmcblk0      First SD/MMC card
                     1 = /dev/mmcblk0p1    First partition on first MMC card
                     8 = /dev/mmcblk1      Second SD/MMC card
                       ...

 179 char         CCube DVXChip-based PCI products
                     0 = /dev/dvxirq0      First DVX device
                     1 = /dev/dvxirq1      Second DVX device
                       ...

 180 char         USB devices
                     0 = /dev/usb/lp0      First USB printer
                       ...
                    15 = /dev/usb/lp15      16th USB printer
                    48 = /dev/usb/scanner0 First USB scanner
                       ...
                    63 = /dev/usb/scanner15 16th USB scanner
                    64 = /dev/usb/rio500    Diamond Rio 500
                    65 = /dev/usb/usblcd    USBLCD Interface (info@usblcd.de)
                    66 = /dev/usb/cpad0     Synaptics cPad (mouse/LCD)
                    96 = /dev/usb/hiddev0   1st USB HID device
                       ...
                   111 = /dev/usb/hiddev15 16th USB HID device
                   112 = /dev/usb/auer0     1st auerswald ISDN device
                       ...
                   127 = /dev/usb/auer15    16th auerswald ISDN device
                   128 = /dev/usb/brlvgr0   First Braille Voyager device
                       ...
                   131 = /dev/usb/brlvgr3   Fourth Braille Voyager device
                   132 = /dev/usb/idmouse   ID Mouse (fingerprint scanner) device
                   133 = /dev/usb/sisusbvga1      First SiSUSB VGA device
                       ...
                   140 = /dev/usb/sisusbvga8      Eighth SISUSB VGA device
                   144 = /dev/usb/lcd       USB LCD device
                   160 = /dev/usb/legousbtower0    1st USB Legotower device
                       ...
                   175 = /dev/usb/legousbtower15   16th USB Legotower device
                   176 = /dev/usb/usbtmc1   First USB TMC device
                       ...
                   192 = /dev/usb/usbtmc16 16th USB TMC device
                   240 = /dev/usb/dabusb0   First daubusb device
                       ...
                   243 = /dev/usb/dabusb3   Fourth dabusb device

 180 block        USB block devices
                     0 = /dev/uba          First USB block device
```

devices.txt

```
         8 = /dev/ubb               Second USB block device
        16 = /dev/ubc               Third USB block device
           ...

181 char        Conrad Electronic parallel port radio clocks
         0 = /dev/pcfclock0    First Conrad radio clock
         1 = /dev/pcfclock1    Second Conrad radio clock
           ...

182 char        Picture Elements THR2 binarizer
         0 = /dev/pethr0       First THR2 board
         1 = /dev/pethr1       Second THR2 board
           ...

183 char        SST 5136-DN DeviceNet interface
         0 = /dev/ss5136dn0    First DeviceNet interface
         1 = /dev/ss5136dn1    Second DeviceNet interface
           ...

        This device used to be assigned to major number 144.
        It had to be moved due to an unfortunate conflict.

184 char        Picture Elements' video simulator/sender
         0 = /dev/pevss0       First sender board
         1 = /dev/pevss1       Second sender board
           ...

185 char        InterMezzo high availability file system
         0 = /dev/intermezzo0  First cache manager
         1 = /dev/intermezzo1  Second cache manager
           ...

        See http://www.inter-mezzo.org/ for more information.

186 char        Object-based storage control device
         0 = /dev/obd0         First obd control device
         1 = /dev/obd1         Second obd control device
           ...

        See ftp://ftp.lustre.org/pub/obd for code and information.

187 char        DESkey hardware encryption device
         0 = /dev/deskey0      First DES key
         1 = /dev/deskey1      Second DES key
           ...

188 char        USB serial converters
         0 = /dev/ttyUSB0      First USB serial converter
         1 = /dev/ttyUSB1      Second USB serial converter
           ...

189 char        USB serial converters - alternate devices
         0 = /dev/cuusb0       Callout device for ttyUSB0
         1 = /dev/cuusb1       Callout device for ttyUSB1
           ...
```

devices.txt

```
                              devices.txt
190 char         Kansas City tracker/tuner card
                    0 = /dev/kctt0          First KCT/T card
                    1 = /dev/kctt1          Second KCT/T card
                    ...

191 char         Reserved for PCMCIA

192 char         Kernel profiling interface
                    0 = /dev/profile        Profiling control device
                    1 = /dev/profile0       Profiling device for CPU 0
                    2 = /dev/profile1       Profiling device for CPU 1
                    ...

193 char         Kernel event-tracing interface
                    0 = /dev/trace          Tracing control device
                    1 = /dev/trace0         Tracing device for CPU 0
                    2 = /dev/trace1         Tracing device for CPU 1
                    ...

194 char         linVideoStreams (LINVS)
                    0 = /dev/mvideo/status0      Video compression status
                    1 = /dev/mvideo/stream0      Video stream
                    2 = /dev/mvideo/frame0       Single compressed frame
                    3 = /dev/mvideo/rawframe0    Raw uncompressed frame
                    4 = /dev/mvideo/codec0       Direct codec access
                    5 = /dev/mvideo/video4linux0 Video4Linux compatibility

                   16 = /dev/mvideo/status1      Second device
                    ...
                   32 = /dev/mvideo/status2      Third device
                    ...
                    ...
                  240 = /dev/mvideo/status15     16th device
                    ...

195 char         Nvidia graphics devices
                    0 = /dev/nvidia0             First Nvidia card
                    1 = /dev/nvidia1             Second Nvidia card
                    ...
                  255 = /dev/nvidiactl           Nvidia card control device

196 char         Tormenta T1 card
                    0 = /dev/tor/0              Master control channel for all
cards
                    1 = /dev/tor/1             First DS0
                    2 = /dev/tor/2             Second DS0
                    ...
                   48 = /dev/tor/48            48th DS0
                   49 = /dev/tor/49            First pseudo-channel
                   50 = /dev/tor/50            Second pseudo-channel
                    ...

197 char         OpenTNF tracing facility
                    0 = /dev/tnf/t0            Trace 0 data extraction
                    1 = /dev/tnf/t1            Trace 1 data extraction
                    ...
```

```
                  128 = /dev/tnf/status            Tracing facility status
                  130 = /dev/tnf/trace             Tracing device

198 char      Total Impact TPMP2 quad coprocessor PCI card
                  0 = /dev/tpmp2/0                 First card
                  1 = /dev/tpmp2/1                 Second card
                    ...

199 char      Veritas volume manager (VxVM) volumes
                  0 = /dev/vx/rdsk/*/*             First volume
                  1 = /dev/vx/rdsk/*/*             Second volume
                    ...

199 block     Veritas volume manager (VxVM) volumes
                  0 = /dev/vx/dsk/*/*              First volume
                  1 = /dev/vx/dsk/*/*              Second volume
                    ...

              The namespace in these directories is maintained by
              the user space VxVM software.

200 char      Veritas VxVM configuration interface
                  0 = /dev/vx/config              Configuration access node
                  1 = /dev/vx/trace               Volume i/o trace access node
                  2 = /dev/vx/iod                 Volume i/o daemon access node
                  3 = /dev/vx/info                Volume information access node
                  4 = /dev/vx/task                Volume tasks access node
                  5 = /dev/vx/taskmon             Volume tasks monitor daemon

201 char      Veritas VxVM dynamic multipathing driver
                  0 = /dev/vx/rdmp/*              First multipath device
                  1 = /dev/vx/rdmp/*              Second multipath device
                    ...
201 block     Veritas VxVM dynamic multipathing driver
                  0 = /dev/vx/dmp/*               First multipath device
                  1 = /dev/vx/dmp/*               Second multipath device
                    ...

              The namespace in these directories is maintained by
              the user space VxVM software.

202 char      CPU model-specific registers
                  0 = /dev/cpu/0/msr              MSRs on CPU 0
                  1 = /dev/cpu/1/msr              MSRs on CPU 1
                    ...

202 block     Xen Virtual Block Device
                  0 = /dev/xvda        First Xen VBD whole disk
                 16 = /dev/xvdb        Second Xen VBD whole disk
                 32 = /dev/xvdc        Third Xen VBD whole disk
                    ...
                240 = /dev/xvdp        Sixteenth Xen VBD whole disk

              Partitions are handled in the same way as for IDE
              disks (see major number 3) except that the limit on
              partitions is 15.
```

```
203 char           CPU CPUID information
                     0 = /dev/cpu/0/cpuid        CPUID on CPU 0
                     1 = /dev/cpu/1/cpuid        CPUID on CPU 1
                     ...

204 char           Low-density serial ports
                     0 = /dev/ttyLU0            LinkUp Systems L72xx UART – port
0
                     1 = /dev/ttyLU1            LinkUp Systems L72xx UART – port
1
                     2 = /dev/ttyLU2            LinkUp Systems L72xx UART – port
2
                     3 = /dev/ttyLU3            LinkUp Systems L72xx UART – port
3
                     4 = /dev/ttyFB0            Intel Footbridge (ARM)
                     5 = /dev/ttySA0            StrongARM builtin serial port 0
                     6 = /dev/ttySA1            StrongARM builtin serial port 1
                     7 = /dev/ttySA2            StrongARM builtin serial port 2
                     8 = /dev/ttySC0            SCI serial port (SuperH) – port
0
                     9 = /dev/ttySC1            SCI serial port (SuperH) – port
1
                    10 = /dev/ttySC2            SCI serial port (SuperH) – port
2
                    11 = /dev/ttySC3            SCI serial port (SuperH) – port
3
                    12 = /dev/ttyFW0            Firmware console – port 0
                    13 = /dev/ttyFW1            Firmware console – port 1
                    14 = /dev/ttyFW2            Firmware console – port 2
                    15 = /dev/ttyFW3            Firmware console – port 3
                    16 = /dev/ttyAM0            ARM "AMBA" serial port 0
                     ...
                    31 = /dev/ttyAM15           ARM "AMBA" serial port 15
                    32 = /dev/ttyDB0            DataBooster serial port 0
                     ...
                    39 = /dev/ttyDB7            DataBooster serial port 7
                    40 = /dev/ttySG0            SGI Altix console port
                    41 = /dev/ttySMX0           Motorola i.MX – port 0
                    42 = /dev/ttySMX1           Motorola i.MX – port 1
                    43 = /dev/ttySMX2           Motorola i.MX – port 2
                    44 = /dev/ttyMM0            Marvell MPSC – port 0
                    45 = /dev/ttyMM1            Marvell MPSC – port 1
                    46 = /dev/ttyCPM0           PPC CPM (SCC or SMC) – port 0
                     ...
                    47 = /dev/ttyCPM5           PPC CPM (SCC or SMC) – port 5
                    50 = /dev/ttyIOC0           Altix serial card
                     ...
                    81 = /dev/ttyIOC31          Altix serial card
                    82 = /dev/ttyVR0            NEC VR4100 series SIU
                    83 = /dev/ttyVR1            NEC VR4100 series DSIU
                    84 = /dev/ttyIOC84          Altix ioc4 serial card
                     ...
                   115 = /dev/ttyIOC115         Altix ioc4 serial card
                   116 = /dev/ttySIOC0          Altix ioc3 serial card
                     ...
```

```
        147 = /dev/ttySIOC31            Altix ioc3 serial card
        148 = /dev/ttyPSC0              PPC PSC - port 0
            ...
        153 = /dev/ttyPSC5              PPC PSC - port 5
        154 = /dev/ttyAT0              ATMEL serial port 0
            ...
        169 = /dev/ttyAT15             ATMEL serial port 15
        170 = /dev/ttyNX0              Hilscher netX serial port 0
            ...
        185 = /dev/ttyNX15             Hilscher netX serial port 15
        186 = /dev/ttyJ0               JTAG1 DCC protocol based serial
port emulation
        187 = /dev/ttyUL0              Xilinx uartlite - port 0
            ...
        190 = /dev/ttyUL3              Xilinx uartlite - port 3
        191 = /dev/xvc0                Xen virtual console - port 0
        192 = /dev/ttyPZ0              pmac_zilog - port 0
            ...
        195 = /dev/ttyPZ3              pmac_zilog - port 3
        196 = /dev/ttyTX0              TX39/49 serial port 0
            ...
        204 = /dev/ttyTX7              TX39/49 serial port 7
        205 = /dev/ttySC0              SC26xx serial port 0
        206 = /dev/ttySC1              SC26xx serial port 1
        207 = /dev/ttySC2              SC26xx serial port 2
        208 = /dev/ttySC3              SC26xx serial port 3
        209 = /dev/ttyMAX0             MAX3100 serial port 0
        210 = /dev/ttyMAX1             MAX3100 serial port 1
        211 = /dev/ttyMAX2             MAX3100 serial port 2
        212 = /dev/ttyMAX3             MAX3100 serial port 3

205 char      Low-density serial ports (alternate device)
          0 = /dev/culu0               Callout device for ttyLU0
          1 = /dev/culu1               Callout device for ttyLU1
          2 = /dev/culu2               Callout device for ttyLU2
          3 = /dev/culu3               Callout device for ttyLU3
          4 = /dev/cufb0               Callout device for ttyFB0
          5 = /dev/cusa0               Callout device for ttySA0
          6 = /dev/cusa1               Callout device for ttySA1
          7 = /dev/cusa2               Callout device for ttySA2
          8 = /dev/cusc0               Callout device for ttySC0
          9 = /dev/cusc1               Callout device for ttySC1
         10 = /dev/cusc2               Callout device for ttySC2
         11 = /dev/cusc3               Callout device for ttySC3
         12 = /dev/cufw0               Callout device for ttyFW0
         13 = /dev/cufw1               Callout device for ttyFW1
         14 = /dev/cufw2               Callout device for ttyFW2
         15 = /dev/cufw3               Callout device for ttyFW3
         16 = /dev/cuam0               Callout device for ttyAM0
            ...
         31 = /dev/cuam15              Callout device for ttyAM15
         32 = /dev/cudb0               Callout device for ttyDB0
            ...
         39 = /dev/cudb7               Callout device for ttyDB7
         40 = /dev/cusg0               Callout device for ttySG0
         41 = /dev/ttycusmx0           Callout device for ttySMX0
```

```
       42 = /dev/ttycusmx1            Callout device for ttySMX1
       43 = /dev/ttycusmx2            Callout device for ttySMX2
       46 = /dev/cucpm0               Callout device for ttyCPM0
       ...
       49 = /dev/cucpm5               Callout device for ttyCPM5
       50 = /dev/cuioc40              Callout device for ttyIOC40
       ...
       81 = /dev/cuioc431             Callout device for ttyIOC431
       82 = /dev/cuvr0                Callout device for ttyVR0
       83 = /dev/cuvr1                Callout device for ttyVR1

206 char       OnStream SC-x0 tape devices
        0 = /dev/osst0                First OnStream SCSI tape, mode 0
        1 = /dev/osst1                Second OnStream SCSI tape, mode
0
        ...
       32 = /dev/osst0l               First OnStream SCSI tape, mode 1
       33 = /dev/osst1l               Second OnStream SCSI tape, mode
1
        ...
       64 = /dev/osst0m               First OnStream SCSI tape, mode 2
       65 = /dev/osst1m               Second OnStream SCSI tape, mode
2
        ...
       96 = /dev/osst0a               First OnStream SCSI tape, mode 3
       97 = /dev/osst1a               Second OnStream SCSI tape, mode
3
        ...
      128 = /dev/nosst0               No rewind version of /dev/osst0
      129 = /dev/nosst1               No rewind version of /dev/osst1
        ...
      160 = /dev/nosst0l              No rewind version of /dev/osst0l
      161 = /dev/nosst1l              No rewind version of /dev/osst1l
        ...
      192 = /dev/nosst0m              No rewind version of /dev/osst0m
      193 = /dev/nosst1m              No rewind version of /dev/osst1m
        ...
      224 = /dev/nosst0a              No rewind version of /dev/osst0a
      225 = /dev/nosst1a              No rewind version of /dev/osst1a
        ...

       The OnStream SC-x0 SCSI tapes do not support the
       standard SCSI SASD command set and therefore need
       their own driver "osst". Note that the IDE, USB (and
       maybe ParPort) versions may be driven via ide-scsi or
       usb-storage SCSI emulation and this osst device and
       driver as well.  The ADR-x0 drives are QIC-157
       compliant and don't need osst.

207 char       Compaq ProLiant health feature indicate
        0 = /dev/cpqhealth/cpqw       Redirector interface
        1 = /dev/cpqhealth/crom       EISA CROM
        2 = /dev/cpqhealth/cdt        Data Table
        3 = /dev/cpqhealth/cevt       Event Log
        4 = /dev/cpqhealth/casr       Automatic Server Recovery
        5 = /dev/cpqhealth/cecc       ECC Memory
```

```
                  6 = /dev/cpqhealth/cmca        Machine Check Architecture
                  7 = /dev/cpqhealth/ccsm        Deprecated CDT
                  8 = /dev/cpqhealth/cnmi        NMI Handling
                  9 = /dev/cpqhealth/css         Sideshow Management
                 10 = /dev/cpqhealth/cram        CMOS interface
                 11 = /dev/cpqhealth/cpci        PCI IRQ interface


208 char      User space serial ports
                  0 = /dev/ttyU0                 First user space serial port
                  1 = /dev/ttyU1                 Second user space serial port
                    ...


209 char      User space serial ports (alternate devices)
                  0 = /dev/cuu0                  Callout device for ttyU0
                  1 = /dev/cuu1                  Callout device for ttyU1
                    ...


210 char      SBE, Inc. sync/async serial card
                  0 = /dev/sbei/wxcfg0           Configuration device for board 0
                  1 = /dev/sbei/dld0             Download device for board 0
                  2 = /dev/sbei/wan00            WAN device, port 0, board 0
                  3 = /dev/sbei/wan01            WAN device, port 1, board 0
                  4 = /dev/sbei/wan02            WAN device, port 2, board 0
                  5 = /dev/sbei/wan03            WAN device, port 3, board 0
                  6 = /dev/sbei/wanc00           WAN clone device, port 0, board
0
                  7 = /dev/sbei/wanc01           WAN clone device, port 1, board
0
                  8 = /dev/sbei/wanc02           WAN clone device, port 2, board
0
                  9 = /dev/sbei/wanc03           WAN clone device, port 3, board
0
                 10 = /dev/sbei/wxcfg1           Configuration device for board 1
                 11 = /dev/sbei/dld1             Download device for board 1
                 12 = /dev/sbei/wan10            WAN device, port 0, board 1
                 13 = /dev/sbei/wan11            WAN device, port 1, board 1
                 14 = /dev/sbei/wan12            WAN device, port 2, board 1
                 15 = /dev/sbei/wan13            WAN device, port 3, board 1
                 16 = /dev/sbei/wanc10           WAN clone device, port 0, board
1
                 17 = /dev/sbei/wanc11           WAN clone device, port 1, board
1
                 18 = /dev/sbei/wanc12           WAN clone device, port 2, board
1
                 19 = /dev/sbei/wanc13           WAN clone device, port 3, board
1
                    ...

              Yes, each board is really spaced 10 (decimal) apart.


211 char      Addinum CPCI1500 digital I/O card
                  0 = /dev/addinum/cpci1500/0    First CPCI1500 card
                  1 = /dev/addinum/cpci1500/1    Second CPCI1500 card
                    ...


212 char      LinuxTV.org DVB driver subsystem
```

```
        0 = /dev/dvb/adapter0/video0    first video decoder of first
card
        1 = /dev/dvb/adapter0/audio0    first audio decoder of first
card
        2 = /dev/dvb/adapter0/sec0      (obsolete/unused)
        3 = /dev/dvb/adapter0/frontend0 first frontend device of first
card
        4 = /dev/dvb/adapter0/demux0    first demux device of first
card
        5 = /dev/dvb/adapter0/dvr0      first digital video recoder
device of first card
        6 = /dev/dvb/adapter0/ca0       first common access port of
first card
        7 = /dev/dvb/adapter0/net0      first network device of first
card
        8 = /dev/dvb/adapter0/osd0      first on-screen-display device
of first card
        9 = /dev/dvb/adapter0/video1    second video decoder of first
card
          ...
       64 = /dev/dvb/adapter1/video0    first video decoder of second
card
          ...
      128 = /dev/dvb/adapter2/video0    first video decoder of third
card
          ...
      196 = /dev/dvb/adapter3/video0    first video decoder of fourth
card

216 char      Bluetooth RFCOMM TTY devices
        0 = /dev/rfcomm0                First Bluetooth RFCOMM TTY
device
        1 = /dev/rfcomm1                Second Bluetooth RFCOMM TTY
device
          ...

217 char      Bluetooth RFCOMM TTY devices (alternate devices)
        0 = /dev/curf0                  Callout device for rfcomm0
        1 = /dev/curf1                  Callout device for rfcomm1
          ...

218 char      The Logical Company bus Unibus/Qbus adapters
        0 = /dev/logicalco/bci/0        First bus adapter
        1 = /dev/logicalco/bci/1        First bus adapter
          ...

219 char      The Logical Company DCI-1300 digital I/O card
        0 = /dev/logicalco/dci1300/0  First DCI-1300 card
        1 = /dev/logicalco/dci1300/1  Second DCI-1300 card
          ...

220 char      Myricom Myrinet "GM" board
        0 = /dev/myricom/gm0            First Myrinet GM board
        1 = /dev/myricom/gmp0           First board "root access"
        2 = /dev/myricom/gm1            Second Myrinet GM board
        3 = /dev/myricom/gmp1           Second board "root access"
```

```
                ...

221 char        VME bus
                0 = /dev/bus/vme/m0          First master image
                1 = /dev/bus/vme/m1          Second master image
                2 = /dev/bus/vme/m2          Third master image
                3 = /dev/bus/vme/m3          Fourth master image
                4 = /dev/bus/vme/s0          First slave image
                5 = /dev/bus/vme/s1          Second slave image
                6 = /dev/bus/vme/s2          Third slave image
                7 = /dev/bus/vme/s3          Fourth slave image
                8 = /dev/bus/vme/ctl         Control

                It is expected that all VME bus drivers will use the
                same interface.  For interface documentation see
                http://www.vmelinux.org/.

224 char        A2232 serial card
                0 = /dev/ttyY0               First A2232 port
                1 = /dev/ttyY1               Second A2232 port
                ...

225 char        A2232 serial card (alternate devices)
                0 = /dev/cuy0                Callout device for ttyY0
                1 = /dev/cuy1                Callout device for ttyY1
                ...

226 char        Direct Rendering Infrastructure (DRI)
                0 = /dev/dri/card0           First graphics card
                1 = /dev/dri/card1           Second graphics card
                ...

227 char        IBM 3270 terminal Unix tty access
                1 = /dev/3270/tty1           First 3270 terminal
                2 = /dev/3270/tty2           Seconds 3270 terminal
                ...

228 char        IBM 3270 terminal block-mode access
                0 = /dev/3270/tub            Controlling interface
                1 = /dev/3270/tub1           First 3270 terminal
                2 = /dev/3270/tub2           Second 3270 terminal
                ...

229 char        IBM iSeries/pSeries virtual console
                0 = /dev/hvc0                First console port
                1 = /dev/hvc1                Second console port
                ...

230 char        IBM iSeries virtual tape
                0 = /dev/iseries/vt0         First virtual tape, mode 0
                1 = /dev/iseries/vt1         Second virtual tape, mode 0
                ...
               32 = /dev/iseries/vt0l        First virtual tape, mode 1
               33 = /dev/iseries/vt1l        Second virtual tape, mode 1
                ...
               64 = /dev/iseries/vt0m        First virtual tape, mode 2
```

```
         65 = /dev/iseries/vt1m      Second virtual tape, mode 2
            ...
         96 = /dev/iseries/vt0a      First virtual tape, mode 3
         97 = /dev/iseries/vt1a      Second virtual tape, mode 3
            ...
        128 = /dev/iseries/nvt0      First virtual tape, mode 0, no
rewind
        129 = /dev/iseries/nvt1      Second virtual tape, mode 0, no
rewind
            ...
        160 = /dev/iseries/nvt0l     First virtual tape, mode 1, no
rewind
        161 = /dev/iseries/nvt1l     Second virtual tape, mode 1, no
rewind
            ...
        192 = /dev/iseries/nvt0m     First virtual tape, mode 2, no
rewind
        193 = /dev/iseries/nvt1m     Second virtual tape, mode 2, no
rewind
            ...
        224 = /dev/iseries/nvt0a     First virtual tape, mode 3, no
rewind
        225 = /dev/iseries/nvt1a     Second virtual tape, mode 3, no
rewind
            ...

        "No rewind" refers to the omission of the default
        automatic rewind on device close.  The MTREW or MTOFFL
        ioctl()'s can be used to rewind the tape regardless of
        the device used to access it.

231 char        InfiniBand
                0 = /dev/infiniband/umad0
                1 = /dev/infiniband/umad1
                  ...
                63 = /dev/infiniband/umad63    63rd InfiniBandMad device
                64 = /dev/infiniband/issm0     First InfiniBand IsSM device
                65 = /dev/infiniband/issm1     Second InfiniBand IsSM device
                  ...
                127 = /dev/infiniband/issm63   63rd InfiniBand IsSM device
                128 = /dev/infiniband/uverbs0  First InfiniBand verbs device
                129 = /dev/infiniband/uverbs1  Second InfiniBand verbs device
                  ...
                159 = /dev/infiniband/uverbs31  31st InfiniBand verbs device

232 char        Biometric Devices
                0 = /dev/biometric/sensor0/fingerprint  first fingerprint sensor
on first device
                1 = /dev/biometric/sensor0/iris         first iris sensor on
first device
                2 = /dev/biometric/sensor0/retina       first retina sensor on
first device
                3 = /dev/biometric/sensor0/voiceprint   first voiceprint sensor
on first device
                4 = /dev/biometric/sensor0/facial       first facial sensor on
first device
```

```
              5 = /dev/biometric/sensor0/hand      first hand sensor on
first device
              ...
             10 = /dev/biometric/sensor1/fingerprint first fingerprint sensor
on second device
              ...
             20 = /dev/biometric/sensor2/fingerprint first fingerprint sensor
on third device
              ...

233 char          PathScale InfiniPath interconnect
                  0 = /dev/ipath        Primary device for programs (any unit)
                  1 = /dev/ipath0       Access specifically to unit 0
                  2 = /dev/ipath1       Access specifically to unit 1
                  ...
                  4 = /dev/ipath3       Access specifically to unit 3
                  129 = /dev/ipath_sma   Device used by Subnet Management Agent
                  130 = /dev/ipath_diag  Device used by diagnostics programs

234-239           UNASSIGNED

240-254 char      LOCAL/EXPERIMENTAL USE

240-254 block     LOCAL/EXPERIMENTAL USE
                  Allocated for local/experimental use.  For devices not
                  assigned official numbers, these ranges should be
                  used in order to avoid conflicting with future assignments.

255 char          RESERVED

255 block         RESERVED

                  This major is reserved to assist the expansion to a
                  larger number space.  No device nodes with this major
                  should ever be created on the filesystem.
                  (This is probably not true anymore, but I'll leave it
                  for now /Torben)

---LARGE MAJORS!!!!!---

256 char          Equinox SST multi-port serial boards
                    0 = /dev/ttyEQ0      First serial port on first Equinox SST
board
                    127 = /dev/ttyEQ127    Last serial port on first Equinox SST
board
                    128 = /dev/ttyEQ128    First serial port on second Equinox SST
board
                    ...
                  1027 = /dev/ttyEQ1027   Last serial port on eighth Equinox SST
board

256 block         Resident Flash Disk Flash Translation Layer
                    0 = /dev/rfda        First RFD FTL layer
                   16 = /dev/rfdb        Second RFD FTL layer
                    ...
                  240 = /dev/rfdp        16th RFD FTL layer
```

```
257 char          Phoenix Technologies Cryptographic Services Driver
                     0 = /dev/ptlsec         Crypto Services Driver

257 block         SSFDC Flash Translation Layer filesystem
                     0 = /dev/ssfdca         First SSFDC layer
                     8 = /dev/ssfdcb         Second SSFDC layer
                    16 = /dev/ssfdcc         Third SSFDC layer
                    24 = /dev/ssfdcd         4th SSFDC layer
                    32 = /dev/ssfdce         5th SSFDC layer
                    40 = /dev/ssfdcf         6th SSFDC layer
                    48 = /dev/ssfdcg         7th SSFDC layer
                    56 = /dev/ssfdch         8th SSFDC layer

258 block         ROM/Flash read-only translation layer
                     0 = /dev/blockrom0     First ROM card's translation layer
interface
                     1 = /dev/blockrom1     Second ROM card's translation layer
interface
                    ...

259 block         Block Extended Major
                  Used dynamically to hold additional partition minor
                  numbers and allow large numbers of partitions per device

259 char          FPGA configuration interfaces
                     0 = /dev/icap0          First Xilinx internal configuration
                     1 = /dev/icap1          Second Xilinx internal configuration

260 char          OSD (Object-based-device) SCSI Device
                     0 = /dev/osd0           First OSD Device
                     1 = /dev/osd1           Second OSD Device
                    ...
                   255 = /dev/osd255        256th OSD Device
```

 ****   ADDITIONAL /dev DIRECTORY ENTRIES

This section details additional entries that should or may exist in
the /dev directory. It is preferred that symbolic links use the same
form (absolute or relative) as is indicated here. Links are
classified as "hard" or "symbolic" depending on the preferred type of
link; if possible, the indicated type of link should be used.

        Compulsory links

These links should exist on all systems:

```
/dev/fd           /proc/self/fd    symbolic           File descriptors
/dev/stdin        fd/0             symbolic           stdin file descriptor
/dev/stdout       fd/1             symbolic           stdout file descriptor
/dev/stderr       fd/2             symbolic           stderr file descriptor
/dev/nfsd         socksys          symbolic           Required by iBCS-2
/dev/X0R          null             symbolic           Required by iBCS-2
```

Note: /dev/X0R is <letter X>-<digit 0>-<letter R>.

Recommended links

It is recommended that these links exist on all systems:

```
/dev/core       /proc/kcore     symbolic        Backward compatibility
/dev/ramdisk    ram0            symbolic        Backward compatibility
/dev/ftape      qft0            symbolic        Backward compatibility
/dev/bttv0      video0          symbolic        Backward compatibility
/dev/radio      radio0          symbolic        Backward compatibility
/dev/i2o*       /dev/i2o/*      symbolic        Backward compatibility
/dev/scd?       sr?             hard            Alternate SCSI CD-ROM name
```

Locally defined links

The following links may be established locally to conform to the
configuration of the system. This is merely a tabulation of existing
practice, and does not constitute a recommendation. However, if they
exist, they should have the following uses.

```
/dev/mouse      mouse port      symbolic        Current mouse device
/dev/tape       tape device     symbolic        Current tape device
/dev/cdrom      CD-ROM device   symbolic        Current CD-ROM device
/dev/cdwriter   CD-writer       symbolic        Current CD-writer device
/dev/scanner    scanner         symbolic        Current scanner device
/dev/modem      modem port      symbolic        Current dialout device
/dev/root       root device     symbolic        Current root filesystem
/dev/swap       swap device     symbolic        Current swap device
```

/dev/modem should not be used for a modem which supports dialin as
well as dialout, as it tends to cause lock file problems. If it
exists, /dev/modem should point to the appropriate primary TTY device
(the use of the alternate callout devices is deprecated).

For SCSI devices, /dev/tape and /dev/cdrom should point to the
``cooked'' devices (/dev/st* and /dev/sr*, respectively), whereas
/dev/cdwriter and /dev/scanner should point to the appropriate generic
SCSI devices (/dev/sg*).

/dev/mouse may point to a primary serial TTY device, a hardware mouse
device, or a socket for a mouse driver program (e.g. /dev/gpmdata).

Sockets and pipes

Non-transient sockets and named pipes may exist in /dev. Common entries are:

```
/dev/printer    socket          lpd local socket
/dev/log        socket          syslog local socket
/dev/gpmdata    socket          gpm mouse multiplexer
```

Mount points

The following names are reserved for mounting special filesystems
under /dev. These special filesystems provide kernel interfaces that
cannot be provided with standard device nodes.

```
/dev/pts          devpts            PTY slave filesystem
/dev/shm          tmpfs             POSIX shared memory maintenance access
```

 ****   TERMINAL DEVICES

Terminal, or TTY devices are a special class of character devices. A
terminal device is any device that could act as a controlling terminal
for a session; this includes virtual consoles, serial ports, and
pseudoterminals (PTYs).

All terminal devices share a common set of capabilities known as line
disciplines; these include the common terminal line discipline as well
as SLIP and PPP modes.

All terminal devices are named similarly; this section explains the
naming and use of the various types of TTYs. Note that the naming
conventions include several historical warts; some of these are
Linux-specific, some were inherited from other systems, and some
reflect Linux outgrowing a borrowed convention.

A hash mark (#) in a device name is used here to indicate a decimal
number without leading zeroes.

        Virtual consoles and the console device

Virtual consoles are full-screen terminal displays on the system video
monitor. Virtual consoles are named /dev/tty#, with numbering
starting at /dev/tty1; /dev/tty0 is the current virtual console.
/dev/tty0 is the device that should be used to access the system video
card on those architectures for which the frame buffer devices
(/dev/fb*) are not applicable. Do not use /dev/console
for this purpose.

The console device, /dev/console, is the device to which system
messages should be sent, and on which logins should be permitted in
single-user mode. Starting with Linux 2.1.71, /dev/console is managed
by the kernel; for previous versions it should be a symbolic link to
either /dev/tty0, a specific virtual console such as /dev/tty1, or to
a serial port primary (tty*, not cu*) device, depending on the
configuration of the system.

        Serial ports

Serial ports are RS-232 serial ports and any device which simulates
one, either in hardware (such as internal modems) or in software (such
as the ISDN driver.) Under Linux, each serial ports has two device
names, the primary or callin device and the alternate or callout one.
Each kind of device is indicated by a different letter. For any
letter X, the names of the devices are /dev/ttyX# and /dev/cux#,
respectively; for historical reasons, /dev/ttyS# and /dev/ttyC#
correspond to /dev/cua# and /dev/cub#. In the future, it should be
expected that multiple letters will be used; all letters will be upper
case for the "tty" device (e.g. /dev/ttyDP#) and lower case for the
"cu" device (e.g. /dev/cudp#).

The names /dev/ttyQ# and /dev/cuq# are reserved for local use.

The alternate devices provide for kernel-based exclusion and somewhat
different defaults than the primary devices. Their main purpose is to
allow the use of serial ports with programs with no inherent or broken
support for serial ports. Their use is deprecated, and they may be
removed from a future version of Linux.

Arbitration of serial ports is provided by the use of lock files with
the names /var/lock/LCK..ttyX#. The contents of the lock file should
be the PID of the locking process as an ASCII number.

It is common practice to install links such as /dev/modem
which point to serial ports. In order to ensure proper locking in the
presence of these links, it is recommended that software chase
symlinks and lock all possible names; additionally, it is recommended
that a lock file be installed with the corresponding alternate
device. In order to avoid deadlocks, it is recommended that the locks
are acquired in the following order, and released in the reverse:

        1. The symbolic link name, if any (/var/lock/LCK..modem)
        2. The "tty" name (/var/lock/LCK..ttyS2)
        3. The alternate device name (/var/lock/LCK..cua2)

In the case of nested symbolic links, the lock files should be
installed in the order the symlinks are resolved.

Under no circumstances should an application hold a lock while waiting
for another to be released. In addition, applications which attempt
to create lock files for the corresponding alternate device names
should take into account the possibility of being used on a non-serial
port TTY, for which no alternate device would exist.

        Pseudoterminals (PTYs)

Pseudoterminals, or PTYs, are used to create login sessions or provide
other capabilities requiring a TTY line discipline (including SLIP or
PPP capability) to arbitrary data-generation processes. Each PTY has
a master side, named /dev/pty[p-za-e][0-9a-f], and a slave side, named
/dev/tty[p-za-e][0-9a-f]. The kernel arbitrates the use of PTYs by
allowing each master side to be opened only once.

Once the master side has been opened, the corresponding slave device
can be used in the same manner as any TTY device. The master and
slave devices are connected by the kernel, generating the equivalent
of a bidirectional pipe with TTY capabilities.

Recent versions of the Linux kernels and GNU libc contain support for
the System V/Unix98 naming scheme for PTYs, which assigns a common
device, /dev/ptmx, to all the masters (opening it will automatically
give you a previously unassigned PTY) and a subdirectory, /dev/pts,
for the slaves; the slaves are named with decimal integers (/dev/pts/#
in our notation). This removes the problem of exhausting the
namespace and enables the kernel to automatically create the device
nodes for the slaves on demand using the "devpts" filesystem.