NAME

sd − driver for SCSI disk drives

SYNOPSIS

#include <linux/hdreg.h> /* for HDIO_GETGEO */
#include <linux/fs.h> /* for BLKGETSIZE and BLKRRPART */

CONFIGURATION

The block device name has the following form: **sd***lp,* where *l* is a letter denoting the physical drive, and *p* is a number denoting the partition on that physical drive. Often, the partition number, *p*, will be left off when the device corresponds to the whole drive.

SCSI disks have a major device number of 8, and a minor device number of the form (16 * *drive_number*) + *partition_number*, where *drive_number* is the number of the physical drive in order of detection, and *partition_number* is as follows:

+3 partition 0 is the whole drive

partitions 1–4 are the DOS "primary" partitions

partitions 5–8 are the DOS "extended" (or "logical") partitions

For example, */dev/sda* will have major 8, minor 0, and will refer to all of the first SCSI drive in the system; and */dev/sdb3* will have major 8, minor 19, and will refer to the third DOS "primary" partition on the second SCSI drive in the system.

At this time, only block devices are provided. Raw devices have not yet been implemented.

DESCRIPTION

The following *ioctl*s are provided:

HDIO_GETGEO

Returns the BIOS disk parameters in the following structure:

```
struct hd_geometry {
    unsigned char  heads;
    unsigned char  sectors;
    unsigned short cylinders;
    unsigned long  start;
};
```

A pointer to this structure is passed as the **ioctl**(2) parameter.

The information returned in the parameter is the disk geometry of the drive *as understood by DOS!* This geometry is *not* the physical geometry of the drive. It is used when constructing the drive's partition table, however, and is needed for convenient operation of **fdisk**(1), **efdisk**(1), and **lilo**(1). If the geometry information is not available, zero will be returned for all of the parameters.

BLKGETSIZE

Returns the device size in sectors. The **ioctl**(2) parameter should be a pointer to a *long*.

BLKRRPART

Forces a reread of the SCSI disk partition tables. No parameter is needed.

The SCSI **ioctl**(2) operations are also supported. If the **ioctl**(2) parameter is required, and it is NULL, then **ioctl**(2) fails with the error **EINVAL**.

FILES

/dev/sd[a−h]
the whole device

/dev/sd[a−h][0−8]
individual block partitions

COLOPHON

This page is part of release 5.02 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at https://www.kernel.org/doc/man−pages/.