NAME

cgget, **cgput**, **cgread**, **cgread1**, **cgwrite**, **cgwrite1** - read/write cylinder groups of UFS disks

LIBRARY

UFS File System Access Library (libufs, -lufs)

SYNOPSIS

```
#include <sys/param.h>
#include <sys/mount.h>
#include <ufs/ufs/ufsmount.h>
#include <ufs/ufs/dinode.h>
#include <ufs/ffs/fs.h>
#include <libufs.h>

int
cgget(int devfd, struct fs *fs, int cg, struct cg *cgp);

int
cgput(int devfd, struct fs *fs, struct cg *cgp);

int
cgread(struct uufsd *disk);

int
cgread1(struct uufsd *disk, int cg);

int
cgwrite(struct uufsd *disk);

int
cgwrite1(struct uufsd *disk, int cg);
```

DESCRIPTION

The **cgget**(), **cgread**(), and **cgread1**() functions provide cylinder group reads for libufs(3) consumers. The **cgput**(), **cgwrite**(), and **cgwrite1**() functions provide cylinder group writes for libufs(3) consumers.

The **cgget**() function reads the cylinder group specified by *cg* into the buffer pointed to by *cgp* from the filesystem described by the *fs* superblock using the *devfd* file descriptor that references the filesystem disk. The **cgget**() function is the only cylinder group read function that is safe to use in threaded applications.

The **cgput**() function writes the cylinder group specified by *cgp* to the filesystem described by the *fs* superblock using the *devfd* file descriptor that references the filesystem disk. The **cgput**() function is the only cylinder group write function that is safe to use in threaded applications. Note that the **cgput**() function needs to be called only if the cylinder group has been modified and the on-disk copy needs to be updated.

The **cgread1**() function reads from the cylinder group specified by *cg* into the *d_cg* cylinder-group structure in a user-land UFS-disk structure. It sets the *d_lcg* field to the cylinder group number *cg*.

The **cgread**() function operates on sequential cylinder groups. Calling the **cgread**() function is equivalent to calling **cgread1**() with a cylinder group specifier equivalent to the value of the current *d_ccg* field, and then incrementing the *d_ccg* field.

The **cgwrite**() function stores on disk the cylinder group held in the *d_cg* cylinder-group structure in a user-land UFS-disk structure.

The **cgwrite1**() function provides no additional functionality over the **cgwrite**() function as there is only one place that a given cylinder group can correctly be written. If the caller gets the *cg* parameter wrong, the function fails with the error EDOOFUS. This function remains only to provide backward compatibility.

RETURN VALUES

The **cgread**() function returns 0 if there are no more cylinder groups to read, 1 if there are more cylinder groups, and -1 on error. The **cgread1**() function returns 1 on success and -1 on error. The other functions return 0 on success and -1 on error.

ERRORS

The **cgget**(), **cgread**(), and **cgread1**() functions may fail and set *errno* for any of the errors specified for the library function bread(3).

The **cgput**(), **cgwrite**(), and **cgwrite1**() functions may fail and set *errno* for any of the errors specified for the library function bwrite(3). Additionally the **cgwrite1**() will return the EDOOFUS error if the cylinder group specified does not match the cylinder group that it is requesting to write.

SEE ALSO

bread(3), bwrite(3), libufs(3)

HISTORY

These functions first appeared as part of libufs(3) in FreeBSD 5.1.

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