NAME

mtio − magnetic tape commands

SYNOPSIS

#include <sys/types.h>
#include <sys/mtio.h>
#include <sys/ioctl.h>

DESCRIPTION

The magnetic tape devices described in **sd**(4) may be sent commands or queried for their status using the following ioctl calls:

ioctl(*fd*, **MTIOCTOP**, &**struct mtop**)
ioctl(*fd*, **MTIOCGET**, &**struct mtget**)

The struct mtop, struct mtget and associated definitions are defined in <sys/mtio.h> as follows:

```
/* Tape operations: ioctl(fd, MTIOCTOP, &struct mtop) */

struct mtop {
    short   mt_op;          /* Operation (MTWEOF, etc.) */
    int     mt_count;       /* Repeat count. */
};

#define MTWEOF   0     /* Write End-Of-File Marker */
#define MTFSF    1     /* Forward Space File mark */
#define MTBSF    2     /* Backward Space File mark */
#define MTFSR    3     /* Forward Space Record */
#define MTBSR    4     /* Backward Space Record */
#define MTREW    5     /* Rewind tape */
#define MTOFFL   6     /* Rewind and take Offline */
#define MTNOP    7     /* No-Operation, set status only */
#define MTRETEN  8     /* Retension (completely wind and rewind) */
#define MTERASE  9     /* Erase the tape and rewind */
#define MTEOM    10    /* Position at End-Of-Media */
#define MTMODE   11    /* Select tape density */
#define MTBLKZ   12    /* Select tape block size */

/* Tape status: ioctl(fd, MTIOCGET, &struct mtget) */

struct mtget {
    short   mt_type;        /* Type of tape device. */

    /* Device dependent "registers". */
    short   mt_dsreg;       /* Drive status register. */
    short   mt_erreg;       /* Error register. */

    /* Misc info. */
    off_t   mt_resid;       /* Residual count. */
    off_t   mt_fileno;      /* Current File Number. */
    off_t   mt_blkno;       /* Current Block Number within file. */
    off_t   mt_blksize;     /* Current block size. */
};
```

See **mt**(1) for a detailed description on what each operation does. The mt_type field is always zero, there is no use for it yet. Mt_dsreg is 0 (OK), 1 (Error), or 2 (EOF encountered.) Mt_erreg holds the SCSI sense key of the last operation. Mt_blksize is the current tape block size in bytes, zero if the block size is variable.

Note that one can issue these commands on a file descriptor that is in use to read or write data, something that **mt** can't do. So you can add eof markers in the middle of an output stream, or get the status of a device before a rewind-on-close tape rewinds.

The driver will automatically add an end of file marker to a tape that is written to if you execute a space command. If you write eof markers yourself then the driver will not add one extra on close.

SEE ALSO

mt(1), **sd**(4).

AUTHOR

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