NAME

filehdr – file header for common object files

SYNOPSIS

#include <filehdr.h>

DESCRIPTION

Every common object file begins with a 20-byte header. The following C **struct** declaration is used:

```
struct  filehdr
{
  unsigned short  f_magic ;   /* magic number */
  unsigned short  f_nscns ;   /* number of sections */
  long            f_timdat ;  /* time & date stamp */
  long            f_symptr ;  /* file ptr to symtab */
  long            f_nsyms ;   /* number of symtab entries */
  unsigned short  f_opthdr ;  /* sizeof(opt and header) */
  unsigned short  f_flags ;   /* flags */
};
```

f_symptr is the byte offset into the file at which the symbol table can be found. Its value can be used as the offset in **fseek**(3S) to position an I/O stream to the symbol table. The UNIX system optional header is 28 bytes. The valid magic numbers are given below:

```
#define  I386MAGIC     0514   /* i386 Computer */
#define  WE32MAGIC     0560   /* 3B2, 3B5, and 3B15 computers */
#define  N3BMAGIC      0550   /* 3B20 computer */
#define  NTVMAGIC      0551   /* 3B20 computer */

#define  VAXWRMAGIC  0570   /* VAX writable text segments */
#define  VAXROMAGIC  0575   /* VAX read only sharable
                               text segments */
```

The value in **f_timdat** is obtained from the **time**(2) system call. Flag bits currently defined are:

```
#define  F_RELFLG    0000001   /* relocation entries stripped */
#define  F_EXEC      0000002   /* file is executable */
#define  F_LNNO      0000004   /* line numbers stripped */
#define  F_LSYMS     0000010   /* local symbols stripped */
#define  F_AR16WR    0000200   /* 16-bit DEC host */
#define  F_AR32WR    0000400   /* 32-bit DEC host */
#define  F_AR32W     0001000   /* non-DEC host */
#define  F_BM32ID    0160000   /* WE32000 family ID field */
```

```
#define  F_BM32B     0020000   /* file contains WE 32100 code */
#define  F_BM32MAU   0040000   /* file reqs MAU to execute */
#define  F_BM32RST   0010000   /* this object file contains restore
                                  work around [3B5/3B2 only] */
```

SEE ALSO

time(2), **fseek**(3S), **a.out**(4)