NAME

fetch, **fubyte**, **fuword**, **fuword16**, **fuword32**, **fuword64**, **fueword**, **fueword32**, **fueword64** - fetch data from user-space

SYNOPSIS

#include <sys/types.h>
#include <sys/systm.h>

int
fubyte(*volatile const void *base*);

long
fuword(*volatile const void *base*);

int
fuword16(*volatile const void *base*);

int32_t
fuword32(*volatile const void *base*);

int64_t
fuword64(*volatile const void *base*);

int
fueword(*volatile const void *base*, *long *val*);

int
fueword32(*volatile const void *base*, *int32_t *val*);

int
fueword64(*volatile const void *base*, *int64_t *val*);

DESCRIPTION

The **fetch** functions are designed to copy small amounts of data from user-space of the current process. If the user address is naturally aligned, then the operation will be performed atomically. Otherwise it may fail or be performed non-atomically, depending on the platform.

The **fetch** routines provide the following functionality:

fubyte()   Fetches a byte of data from the user-space address *base*. The byte read is zero-extended

into the results variable.

fuword()   Fetches a word of data (long) from the user-space address *base*.

fuword16()   Fetches 16 bits of data from the user-space address *base*. The half-word read is zero-extended into the results variable.

fuword32()   Fetches 32 bits of data from the user-space address *base*.

fuword64()   Fetches 64 bits of data from the user-space address *base*.

fueword()   Fetches a word of data (long) from the user-space address *base* and stores the result in the variable pointed by *val*.

fueword32() Fetches 32 bits of data from the user-space address *base* and stores the result in the variable pointed by *val*.

fueword64() Fetches 64 bits of data from the user-space address *base* and stores the result in the variable pointed by *val*.

The callers of **fuword**(), **fuword32**() and **fuword64**() functions cannot distinguish between -1 read from userspace and function failure.

RETURN VALUES
The **fubyte**(), **fuword**(), **fuword16**(), **fuword32**(), and **fuword64**() functions return the data fetched or -1 on failure. The **fueword**(), **fueword32**() and **fueword64**() functions return 0 on success and -1 on failure.

SEE ALSO
copy(9), store(9)