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vuidmice, vuidm3p, vuidm4p, vuidm5p, vuid2ps2, vuid3ps2 – converts mouse protocol to Firm Events

SYNOPSIS

```
#include <sys/stream.h>
#include <sys/vuid_event.h>
int ioctl(fd, I_PUSH, vuidm3p);
int ioctl(fd, I_PUSH, vuidm4p);
int ioctl(fd, I_PUSH, vuidm5p);
int ioctl(fd, I_PUSH, vuid2ps2);
int ioctl(fd, I_PUSH, vuid3ps2);
```

AVAILABILITY

x86

DESCRIPTION

The STREAMS modules **vuidm3p**, **vuidm4p**, **vuidm5p**, **vuid2ps2**, and **vuid3ps2** convert mouse protocols to Firm events. The Firm event structure is described in **<sys/vuid_event.h>**. Pushing a STREAMS module does not automatically enable mouse protocol conversion to Firm events. The STREAMS module state is initially set to raw or **VUID_NATIVE** mode which performs *no* message processing. The user will need to change the state to **VUID_FIRM_EVENT** mode in order to initiate mouse protocol conversion to Firm events. This can be accomplished by the following code:

```
int format;

format = VUID_FIRM_EVENT;
ioctl(fd, VUIDSFORMAT, &format);
```

The user can also query the state of the STREAMS module by using the **VUIDGFORMAT** option.

```
int format;

int fd;   /* file descriptor */

ioctl(fd, VUIDGFORMAT, &format);

if ( format == VUID_NATIVE );
          /* The state of the module is in raw mode.
           * Message processing is not enabled.
           */

if ( format == VUID_FIRM_EVENT );
          /* Message processing is enabled.
           * Mouse protocol conversion to Firm events
           * are performed.
```

The remainder of this section describes the processing of STREAMS messages on the read- and write-side.

Read Side Behavior

M_DATA The messages coming in are queued and converted to Firm events.

M_FLUSH The read queue of the module is flushed of all its data messages and all data in the record being accumulated are also flushed. The message is passed upstream.

Write Side Behavior

M_IOCTL messages sent downstream as a result of an **ioctl**(2) system call. There are two valid **ioctl** options processed by the **vuidmice** modules **VUIDGFORMAT** and **VUIDSFORMAT**.

VUIDGFORMAT This option returns the current state of the STREAMS module. The state of the **vuidmice** STREAMS module may either be **VUID_NATIVE** (no message processing) or **VUID_FIRM_EVENT** (convert to Firm events).

VUIDSFORMAT This option sets the state of the STREAMS module to **VUID_FIRM_EVENT**. If the state of the STREAMS module is already in **VUID_FIRM_EVENT** then this option is non-operational.

It is not possible to set the state back to **VUID_NATIVE** once the state becomes **VUID_FIRM_EVENT**. To disable message processing, pop the STREAMS module out by calling **ioctl(fd, 1I_POP, vuid*)**.

M_FLUSH The write queue of the module is flushed of all its data messages and the message is passed downstream.

Mouse Configurations

Module	**Protocol Type**	**Device**
vuidm3p	3-Byte Protocol Microsoft 2 Button Serial Mouse	 **/dev/tty***
vuidm4p	4-Byte Protocol Logitech 3 Button Mouseman	 **/dev/tty***
vuidm5p	5-Byte Protocol Logitech 3 Button Bus Mouse Microsoft Bus Mouse	 **/dev/logi** **/dev/msm**
vuid2ps2	PS/2 Protocol 2 Button PS/2 Compatible Mouse	 **/dev/kdmouse**
vuid3ps2	PS/2 Protocol 3 Button PS/2 Compatible Mouse	 **/dev/kdmouse**

SEE ALSO

STREAMS Programming Guide