NAME

visual_io – Solaris VISUAL I/O control operations

SYNOPSIS

#include <sys/visual_io.h>

DESCRIPTION

The Solaris VISUAL environment defines a small set of ioctls for controlling graphics and imaging devices.

One ioctl, **VIS_GETIDENTIFIER,** is mandatory, and must be implemented in device drivers for graphics devices using the Solaris VISUAL environment. The **VIS_GETIDENTIFIER,** ioctl is defined to return a device identifier from the device driver. This identifier must be a uniquely-defined string.

Another set of ioctls supports mouse tracking via hardware cursor operations. These are optional, but if a graphics device has hardware cursor support and implements these ioctls the mouse tracking performance will be improved.

IOCTLS

VIS_GETIDENTIFIER

This ioctl returns an identifier string to uniquely identify a device used in the Solaris VISUAL environment. This is a mandatory ioctl and must return a unique string. **VIS_GETIDENTIFIER** takes a **vis_identifier** structure as its parameter. This structure has the form:

```
#define VIS_MAXNAMELEN 128

struct vis_identifier {
        char name[VIS_MAXNAMELEN];
};
```

We suggest the name be formed as <*companysymbol*><*devicetype*>. For example, the cgsix driver returns **SUNWcg6 .**

VIS_GETCURSOR

VIS_SETCURSOR

These ioctls fetch and set various cursor attributes, using the **vis_cursor** structure.

```
struct vis_cursorpos {
        short           x;              /* cursor x coordinate */
        short           y;              /* cursor y coordinate */
};

struct vis_cursorcmap {
        int             version;        /* version */
        int             reserved;
        unsigned char   *red;           /* red color map elements */
        unsigned char   *green;         /* green color map elements */
        unsigned char   *blue;          /* blue color map elements */
};
```

```
#define VIS_CURSOR_SETCURSOR        0x01    /* set cursor */
#define VIS_CURSOR_SETPOSITION      0x02    /* set cursor position */
#define VIS_CURSOR_SETHOTSPOT       0x04    /* set cursor hot spot */
#define VIS_CURSOR_SETCOLORMAP      0x08    /* set cursor colormap */
#define VIS_CURSOR_SETSHAPE         0x10    /* set cursor shape */

#define VIS_CURSOR_SETALL           (VIS_CURSOR_SETCURSOR | \
                                    VIS_CURSOR_SETPOSITION | \
                                    VIS_CURSOR_SETHOTSPOT | \
                                    VIS_CURSOR_SETCOLORMAP | \
                                    VIS_CURSOR_SETSHAPE)

struct vis_cursor {
        short                   set;        /* what to set */
        short                   enable;     /* cursor on/off */
        struct vis_cursorpos    pos;        /* cursor position */
        struct vis_cursorpos    hot;        /* cursor hot spot */
        struct vis_cursorcmap   cmap;       /* color map info */
        struct vis_cursorpos    size;       /* cursor bit map size */
        char                    *image;     /* cursor image bits */
        char                    *mask;      /* cursor mask bits */
};
```

The **vis_cursorcmap** structure should contain pointers to two elements, specifying the red, green, and blue values for foreground and background.

VIS_MOVECURSOR

VIS_SETCURSORPOS

These ioctls fetch and move the current cursor position, using the **vis_cursorpos** structure.