

**NAME**

Xsun - X window system Sun workstation implementation notes

**DESCRIPTION**

The Sun X server cannot be started by *init(8)*; it must be started as a command from the normal login shell. It takes two mandatory command line arguments, the first being the file name of the frame buffer (typically */dev/fb*, special case "0" interpreted as */dev/fb*) and the second being 0:

```
Xsun /dev/fb 0
```

The Sun X server will normally be started by *xinit(1)*.

The initial Sun drivers use the **-lpxrect** library to address the device, and will thus run on Sun 1 and Sun 2 monochrome and color displays. The drivers will work with either the 2.0 or 3.0 versions of the Sun system.

The Sun X server looks for its fonts in a default path of directories, which can be overridden by the XFONTSPATH environment variable. This is a colon-separated list of directories, in which ~ can be used to indicate the user's \$HOME.

**SEE ALSO**

X(8c), X(1), xinit(1)

'Xlib - C Language X Interface' 'ddX - Device Dependent X Interface'

**FILES**

/tmp/X\* Unix domain socket

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**BUGS**

The X server on the Sun maintains the cursor image itself; it does not use the kernel mouse tracking. The implementation is designed to keep the cursor in the bitmap as much as possible, at the cost of additional computation. An alternative implementation that delayed replacing the cursor until the server was about to block would have much lower overhead. The design decision was based on experience with a range of implementations in Carnegie-Mellon's *Andrew* window manager; users seemed to prefer a cursor that was slower but didn't flash so much.

Get and put operations on non-constant color Pixmaps with even widths will be significantly faster than on those with odd widths; this is due to a mis-match between the alignment restrictions of X and the Sun *pxrect* library.

The server can address only one display; this is a restriction of the X system itself and is not likely to change soon.

The drivers at present have a number of restrictions, most of which should be removed in future versions with a little effort:

- Sun 1 color displays untested; they will probably do strange things to text, cursors, etc.
- Dashed lines will be drawn as solid.
- Brush shapes are not implemented; the brush track will be drawn as a solid line.
- Tile filling with a bitmap (i.e. not a constant Pixmap) through an xymask is not implemented.
- Filling a polygon is not implemented.
- Up events are not available for any keys on the keyboard.
- Down events are not available for the SHIFT/SHIFT\_LOCK/CTRL/META keys.
- No SHIFT\_LOCK key is defined.

- On the 2.X kernel (but not the 3.0 kernel), the META key is defined in a restricted way. It is possible to type meta-characters, but not possible to receive meta-buttons from the mouse.
- The function keys generate the standard ASCII escape sequences, they are not available as individual keys.
- The "feep" (audible bell) function on the Sun defaults to minimum intensity.
- There are differences in transfer function between the Sun/2 and uVAX color displays; the */usr/lib/rgb* database should be display-dependent.
- It should be possible to use *~name* to indicate another user's \$HOME in the XFONTPATH variable.
- Font loading is slow, because of the need to convert from strike to bitmap format, swap bytes, invert pixel order and so on. It should be possible to use both Sun and X fonts; loading Sun fonts would be faster.