NAME

xil_kernel_get_by_name, xil_kernel_get_name, xil_kernel_set_name – get and set a kernel object name and get a handle to a kernel by specifying its name

SYNOPSIS

#include <xil/xil.h>

XilKernel xil_kernel_get_by_name (XilSystemState *State*, **char** *name);

char *name* **xil_kernel_get_name (XilKernel** *kernel*);

void xil_kernel_set_name (XilKernel *kernel*, **char** *name);

DESCRIPTION

Use these functions to assign names to kernel objects, to read kernel names, and to retrieve kernel objects by name. A predefined kernel is created at the time of an **xil_open**(3) call. This kernel can be retrieved by **xil_kernel_get_by_name**().

xil_kernel_get_by_name() returns the handle to the kernel with the specified name *name.* If such a kernel does not exist, NULL is returned. **xil_kernel_get_by_name**() does not make a copy of the kernel.

xil_kernel_get_name() returns a copy of the specified kernel's name. A call to **free** (3) should be used to free the space allocated by **xil_kernel_get_name**(). If the specified kernel has no name, NULL is returned.

xil_kernel_set_name() sets the name of the specified kernel to the one provided.

Standard Kernel Provided

The XIL library creates a predefined kernel at the time of an **xil_open**(3) call. This kernel, "floyd-steinberg", can be used with error diffusion operations.

ERRORS

For a complete list of XIL error messages by number, consult Appendix B of the *XIL Programmer's Guide.*

EXAMPLES

Create an edge-sharpening kernel named "sharp1":

```
XilSystemState State;
XilKernel kernel;
float data[] =      { 0.0 -1.0  0.0
                     -1.0  5.0 -1.0
                      0.0 -1.0  0.0 };

kernel = xil_kernel_create(State,3,3,0,0,data);
xil_kernel_set_name(kernel, "sharp1");
```

Use a kernel named "sharp1" to convolve an image:

```
XilSystemState State;
XilImage src, dst;
XilKernel kernel;

kernel = xil_kernel_get_by_name(State,"sharp1");
xil_convolve(src, dst, kernel, XIL_EDGE_ZERO_FILL);
```

NOTES

The set of standard objects is generated for each instantiation of an *XilSystemState.* If these standard objects are deleted, they become unavailable for the duration of the current XIL session.

If you give two kernels the same name, it is not defined which kernel will be retrieved by a call to **xil_kernel_get_by_name**().

SEE ALSO

xil_open(3), **xil_kernel_create**(3).