NAME

xil_ordered_dither – use ordered dithering to convert a multiband or single-band image into a single-band image with a colormap

SYNOPSIS

#include <xil/xil.h>

void xil_ordered_dither(XilImage *src*,
XilImage *dst,*
XilLookup *cmap,*
XilDitherMask *mask)*

DESCRIPTION

This routine performs an ordered dithering of a *src* (source) image with dither matrices and produces a single-band *dst* (destination) image. *cmap* is a lookup table and must be a colorcube. *mask* is a dither mask and must contain n matrices for an n-band source image. These matrices must have the same dimensions and contain floating point values between 0.0 and 1.0.

ERRORS

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

EXAMPLES

Ordered-dither a 3-band image into a single-band image using a 4x4 dither mask:

```
XilImage src;                     /* 3-band source image */
XilImage dst;                     /* 1-band destination image */
XilLookup colormap;               /* colorcube */
XilDitherMask dithermask;         /* 3 dither matrices */
float data[]= {   0.0,     0.5,     0.125,   0.625,
                  0.75,    0.25,    0.875,   0.375,
                  0.1875,  0.6875,  0.0625,  0.5625,
                  0.9375,  0.4375,  0.8125,  0.3125,
                  0.0,     0.5,     0.125,   0.625,
                  0.75,    0.25,    0.875,   0.375,
                  0.1875,  0.6875,  0.0625,  0.5625,
                  0.9375,  0.4375,  0.8125,  0.3125,
                  0.0,     0.5,     0.125,   0.625,
                  0.75,    0.25,    0.875,   0.375,
                  0.1875,  0.6875,  0.0625,  0.5625,
                  0.9375,  0.4375,  0.8125,  0.3125};

dithermask = xil_dithermask_create(State, 4, 4, 3, data);

xil_ordered_dither(src, dst, colormap, dithermask);
```

NOTES

In-place operations can occur when converting a single-band image into a single-band image of the same data type with a colormap.

SEE ALSO

xil_dithermask_create(3), **xil_lookup_create_copy**(3), **xil_lookup_destroy**(3), **xil_lookup_get_input_datatype**(3), **xil_lookup_get_num_entries**(3), **xil_lookup_get_offset**(3), **xil_lookup_get_output_datatype**(3), **xil_lookup_get_output_nbands**(3), **xil_lookup_set_offset**(3), **xil_lookup_convert**(3), **xil_colorcube_create**(3), **xil_lookup_get_colorcube**(3), **xil_lookup_get_colorcube_info**(3).