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//
//  GRGradientFunctions
//
//  By Anders Bertelrud
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//
//  This module contains two functions to draw NeXTSTEP 4.0 style gradients.
//  Both functions work by creating an 8-bits-per-sample bitmap on the fly and then drawing it
//  to the current context using NXDrawBitmap (which dithers it down to the screen depth). It
//  would almost certainly be more efficient to switch on the desired pixel depth and dither as
//  the pixels values are written. Since this is a quick hack to get blue gradient title bars
//  and gray gradient buttons to work, though, I didn't think it would be worth the time.
//  To make these functions reasonable efficient, fixed-point arithmetic is used (16 bits for
//  the whole number and 16 for the fraction). It's a simple linear interpolation, as in any
//  rasterizer, except that it's special-cased for the 45 degree diagonal gradients we're
//  interested in here. Rasterization 101. Simple stuff.
//  The functions are nowhere near optimized, though. About the only optimization made is the
//  fixed-point interpolation.
//  These functions can be used separately, without the other classes in this package.
//
```

```
#import <appkit/graphics.h>
```

```
void GRDrawHSBGradient (NXRect rectangle, float hue, float saturation, float startBrightness,
    float endBrightness);
    // Fills the given rectangle with a gradient in any hue. The gradient is NS4.0-style, i.e.
    // brightness is interpolated from the upper left corner to the lower right corner of the
    // rectangle. "Hue" and "saturation" remain constant throughout the gradient, and brightness
    // is interpolated from "startBrightness" (in the upper left corner) to "endBrightness" (in
    // the lower right corner). Lines perpendicular to the upper-left to lower-right diagonal
    // get constant colour.
    // The size of the input rectangle isn't checked. If you pass in a ten-thousand-by-ten-
    // thousand rectangle, you will fill up swap space. Remember, this is a hack. :-)
```

```
void GRDrawGrayGradient (NXRect rectangle, float startBrightness, float endBrightness);
    // Like GRDrawHSBGradient, except that the saturation is always zero (which makes the hue
    // irrelevant). Using this function is faster than calling GRDrawGrayGradient passing zero
    // for "saturation".
```