Pseudo-random ramblings about programming and other geeky stuff

Thursday, 3 December 2015

Low-level Graphics on Raspberry Pi [palette]

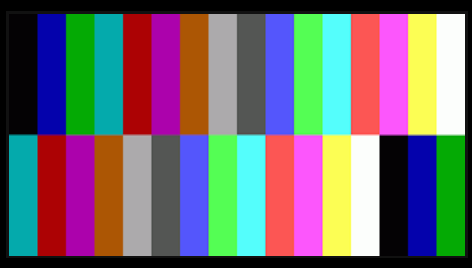
Again life has happened and the time has slipped. Thanks for the response on the Raspberry Pi forum. To iterate the message from there: I have disabled comments here because I cannot guarantee any kind of decent response time, sorry.

Just a quick, short one now on something I came across trawling through old stuff. *Palette animation* a.k.a *color cycling* (Wikipedia) is a technique that might produce interesting effects when applied to a suitably arranged image. In most cases it is likely to be a lot faster than redrawing the actual pixels. Continuing from the `fbtest5.c` introduced in Part V we can animate the palette like this:

```
// draw...
draw();
sleep(1);

int j;
for(j = 0; j < 16; j++) {
    for(i = 0; i < 16; i++) {
        // rotate the original values based on j changing...
        r[i] = def_r[(i + j + 1) % 16] << 8;
        g[i] = def_g[(i + j + 1) % 16] << 8;
        b[i] = def_b[(i + j + 1) % 16] << 8;
    }
    // Note that we set up the 'pal' structure earlier
    // and it still points to the r, g, b arrays,
    // so we can just reuse 'pal' here
    if (ioctl(fbfd, FBIOPUTCMAP, &pal)) {
        printf("Error setting palette.\n");
    }
    sleep(1);
}
```

...which should cycle the color bars in the lower half of the screen.



[Full source available in GitHub]

[Continued in next part Images]

Posted by Unknown at 14:36

Labels: C, graphics, Linux, Raspberry Pi

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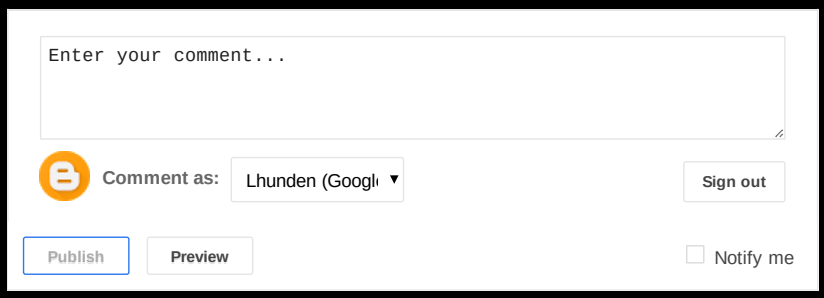

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