Subject: Re: Inverse palette conversion algorithm...
Posted by mirek on Fri, 07 Apr 2006 09:16:00 GMT
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What a nice trick, I did not knew this one! Thanks!

As for the purpose of the code: You have truecolor raster image and you have some existing palette. You want to convert truecolor to palette (indexed).

Now in theory, you should for each color of image find closest color - by equaction (r1 - r2)^2 + (g1 - g2)^2 + (b1 - b2)^2 (where ^2 is not xor but square).

Of course, performing this calculation for each pixel would be too slow, therefore standard approach reduces original pixel depth (to 64K colors here) and provides "inverse transformation cube" - a table that can be used to perform quick lookup of palette index for each possible color.

This algorithm builds such cube. "Brute force approach" is to go through all cells of cube and find closest color from palette for it. Above implementation is almost 20x faster in the average case...

Mirek