Subject: Alpha in Color
Posted by andrei_natanael on Sat, 30 Jan 2010 22:08:01 GMT
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Is there any reason why Color doesn't have alpha component? It have but it can't be set i.e. Color(255, 123, 223, 128).
Also if converting from RGBA to Color i think it loose color value if alpha is 0 (Color.cpp:76);

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Color::Color(RGBA rgba)
{
 if(rgba.a == 0)
  color = 0xffffffff;
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IMO it should preserve colors from rgba even if alpha is 0; I was doing conversion from QPixmap (from Qt) to Image (Upp) in some test for my graduation thesis and i liked the idea to be able to fill QPixmap with a "transparent" color.

Subject: Re: Alpha in Color
Posted by mirek on Sun, 31 Jan 2010 12:36:19 GMT
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andrei_natanael wrote on Sat, 30 January 2010 17:08Is there any reason why Color doesn't have alpha component? It have but it can't be set i.e. Color(255, 123, 223, 128).
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I believe color is simply color. That is no notion of transparency in that term.

As for converting RGBA to Color, beware! RGBA is in premultiplied format, that in turn means that if alpha is 0, there is no color information that can possibly be extracted from RGBA. That is by definition. Correct RGBA should have R,G,B set to zero if alpha is zero. (Sidenote: We have not invented premultiplied RGBA, it is standard). Thus it seems quite logical to set Color to Null in that case.

Getting back to Color with alpha vs not, I guess both options have merits and drawbacks. All in all, I think that keeping both concepts separate causes very little problems. RGBA->Color and Color+alpha -> RGBA are simple.

In fact, as -> RGBA conversion is done using alpha * Color, it fits nicely with the concept of "premultiplication".