
Subject: Re: DarkTheme function parameters changed

Posted by [Tom1](#) on Mon, 16 Sep 2024 11:01:31 GMT

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Hi Mirek,

These two functions can be useful tools when working with colors, so please feel free to merge them in Color.h / Color.cpp if you like:

// Formula from <https://www.w3.org/TR/2008/REC-WCAG20-20081211/#relativeluminancedef>

```
double RelativeLuminance(Color color) {  
    auto comp = [&] (double c){  
        c /= 255;  
        return (c <= 0.03928) ? c / 12.92 : pow((c + 0.055) / 1.055, 2.4);  
    };  
    return comp(color.GetR()) * 0.2126 + comp(color.GetG()) * 0.7152 + comp(color.GetB()) * 0.0722;  
}
```

// Formula from <https://www.w3.org/TR/2008/REC-WCAG20-20081211/#contrast-ratiodef>

```
double ContrastRatio(Color c1, Color c2) {  
    double rl1 = RelativeLuminance(c1);  
    double rl2 = RelativeLuminance(c2);  
    return (max(rl1, rl2) + 0.05) / (min(rl1, rl2) + 0.05);  
}
```

Best regards,

Tom
