
Subject: [Proposal] RGB <-> CMYK conversion functions.

Posted by [Oblivion](#) on Mon, 13 Apr 2020 11:10:19 GMT

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Hello,

U++ already has RGB <-> HSV conversion functions.

Below functions might be a handy addition to them, for people using color conversion a lot.

```
void CMYKtoRGB(double c, double m, double y, double k, double& r, double& g, double& b)
{
    k = clamp(k, 0.0, 1.0);
    r = (1 - c) * (1 - k);
    g = (1 - m) * (1 - k);
    b = (1 - y) * (1 - k);
}
```

```
void RGBtoCMYK(double r, double g, double b, double& c, double& m, double& y, double& k)
{
    k = 1 - max(max(r, g), b);
    c = (1 - r - k) / (1 - k);
    m = (1 - g - k) / (1 - k);
    y = (1 - b - k) / (1 - k);
}
```

```
Color CmykColorf(double c, double m, double y, double k)
{
    double r, g, b;
    CMYKtoRGB(c, m, y, k, r, g, b);
    return Color(min(int(r * 255), 255), min(int(g * 255), 255), min(int(b * 255), 255));
}
```

```
Color CmyColorf(double c, double m, double y)
{
    double r, g, b;
    CMYKtoRGB(c, m, y, 0.0, r, g, b);
    return Color(min(int(r * 255), 255), min(int(g * 255), 255), min(int(b * 255), 255));
}
```

Best regards,
Oblivion

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [mirek](#) on Mon, 13 Apr 2020 11:25:06 GMT
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Cool, added, without `CmyColorf`, using

`Color CmykColorf(double c, double m, double y, double k = 0);`

instead

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [Oblivion](#) on Mon, 13 Apr 2020 11:43:45 GMT
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Thanks!

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [Didier](#) on Mon, 13 Apr 2020 17:31:43 GMT
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Hello,

As there is an `RGBA` type, a `Color` type : adding a `CMYK` would be quite logical with conversion methods available
What do you think ?

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [mirek](#) on Tue, 14 Apr 2020 08:20:35 GMT
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Didier wrote on Mon, 13 April 2020 19:31Hello,

As there is an `RGBA` type, a `Color` type : adding a `CMYK` would be quite logical with conversion methods available
What do you think ?

I think I do not understand what exactly do you mean :)

Mirek

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [Didier](#) on Wed, 15 Apr 2020 19:20:09 GMT

Hello Mirek,

Well it would be nice to have:

```
Class Color {  
    operator RGBA() const  
    operator CMYK() const  
}
```

```
class RGBA {  
    operator Color() const  
    operator CMYK() const  
}
```

```
class CMYK {  
    operator Color() const  
    operator RGBA() const  
}
```

So conversion from one to another is as simple as it can get

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.

Posted by [mirek](#) on Wed, 15 Apr 2020 20:31:18 GMT

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Didier wrote on Wed, 15 April 2020 21:20Hello Mirek,

Well it would be nice to have:

```
Class Color {  
    operator RGBA() const  
    operator CMYK() const  
}
```

```
class RGBA {  
    operator Color() const  
    operator CMYK() const  
}
```

```
class CMYK {  
    operator Color() const
```

```
    operator RGBA() const  
}
```

There is no CMYK class. Conversions operators RGBA<->Color already exist.

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [Didier](#) on Thu, 16 Apr 2020 18:50:43 GMT
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Quote:There is no CMYK class
That is exactly my point :)

Quote:Conversions operators RGBA<->Color already exist
So if we add a CMYK class, we can have conversion operators for all three color type classes :
Colors, RGBA and CMYK

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [mirek](#) on Thu, 16 Apr 2020 20:52:06 GMT
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What would be the point? I think current conversion functions for CMYK, CMY and HSV are enough, if your software is really using them so often, which I doubt, you can add CMYK class to your code with conversion operators/constructors..

Subject: Re: [Proposal] RGB <-> CMYK conversion functions.
Posted by [Didier](#) on Wed, 22 Apr 2020 08:22:15 GMT
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Helle Mirek,

I don't use colors except for simple use cases (and don't know much about their full usage neither)
My point was only a suggestion