The Link to the Online and Constantly Updated Version of this Document HERE

ALGOS I USED

Color Space Conversion Algorithms

- RGB ⇔ RYB
  - RGB -> RYB
    - https://github.com/bahamas10/node-rgb2ryb
  - RYB -> RGB
    - https://github.com/bahamas10/node-ryb2rgb
    - Using Trilinear Interpolation
      - NOTE: it has no mathematical inverse (check math forum, and I messaged the author of the paper)… which for our purposes makes it unusable…
      - http://web.siat.ac.cn/~baoquan/papers/ryb_TR.pdf
      - http://vis.computer.org/vis2004/DVD/infovis/papers/gossett.pdf
      - https://math.stackexchange.com/questions/305395/ryb-and-rgb-color-space-conversion
- RGB ⇔ CMYK
  - https://github.com/AndreasSoiron/Color_mixer/blob/master/color_mixer.js

Color Mixing Algorithms

- RGB Mixing
  - http://jsbin.com/afomim/1/edit?html,css,js,output
    - Color averaging
- RYB Mixing
  - https://github.com/camme/ryb-color-mixer
    - Each color as percent of max
- CMYK Mixing
  - https://github.com/AndreasSoiron/Color_mixer/blob/master/color_mixer.js
    - Color averaging

ALGOS I MIGHT USE

Color Space Conversion Algorithms

- All
  - http://colorizer.org/
  - https://www.w3schools.com/lib/w3color.js
    - https://www.w3schools.com/colors/colors_converter.asp
  - https://www.easycalculation.com/colorconverter/colorconverter.php
  - http://www.ginifab.com/feeds/pms/cmyk_to_rgb.php

    - https://toolstud.io/color/
    - https://stackoverflow.com/questions/4945457/conversion-between-rgb-and-ryb-color-spaces
- RGB ⇔ RYB
    - http://www.deathbysoftware.com/colors/index.html
    - http://nishitalab.org/user/UEI/publication/Sugita_SIG2015.pdf
    - http://nishitalab.org/user/UEI/publication/Sugita_IWAIT2015.pdf
    - RGB -> RYB
        - ???
    - RYB -> RGB
        - ???
- RGB ⇔ CMYK
    - http://www.convertacolor.com/
        - Also has RGB ⇔ CMYK ⇔ HSL
    - RGB -> CMYK
        - https://www.rapidtables.com/convert/color/rgb-to-cmyk.html
        - https://codebeautify.org/rgb-to-cmyk-converter
        - http://www.rgb2cmyk.org/
    - CMYK -> RGB
        - https://www.rapidtables.com/convert/color/cmyk-to-rgb.html
        - https://codebeautify.org/cmyk-to-rgb-converter
        - http://www.cmyk2rgb.com/
- Other
    - https://stackoverflow.com/questions/4235072/math-behind-the-colour-wheel
        - RGB -> HSV
        - HSL and HSV

Color Mixing Algorithms

- RANDOM EQUATION
    - NewColor.R = 255 - SQRT(((255-Color1.R)^2 + (255-Color2.R)^2)/2)
      NewColor.G = 255 - SQRT(((255-Color1.G)^2 + (255-Color2.G)^2)/2)
      NewColor.B = 255 - SQRT(((255-Color1.B)^2 + (255-Color2.B)^2)/2)
- RANDOM EQUATION
    - NewColor.R = (Color1.R * Color2.R)/255
      NewColor.G = (Color1.G * Color2.G)/255
      NewColor.B = (Color1.B * Color2.B)/255
- https://stackoverflow.com/questions/6130621/algorithm-for-finding-the-color-between-two-others-in-the-colorspace-of-painte?noredirect=1&lq=1
- https://stackoverflow.com/questions/726549/algorithm-for-additive-color-mixing-for-rgb-values
- https://stackoverflow.com/questions/1351442/is-there-an-algorithm-for-color-mixing-that-works-like-mixing-real-colors
- https://stackoverflow.com/questions/4255973/calculation-of-a-mixed-color-in-rgb

- https://github.com/ddelruss/UIColor-Mixing
- https://github.com/fyngyrz/colorblending
- Kubelka-Munk Mixing / Krita Mixing
    - IMPLEMENTATION LINKS:
        - http://stackoverflow.com/questions/10254022/implementing-kubelka-munk-like-krita-to-mix-colours-color-like-paint
        - https://www.stevenabbott.co.uk/practical-coatings/Kubelka-Munk.php
        - http://www.graphics.cornell.edu/~westin/pubs/kubelka.pdf
        - Krita
            - https://commit-digest.kde.org/issues/2007-08-12/
            - https://www.youtube.com/watch?v=lyLPZDVdQiQ
            - https://github.com/abhishekmurthy/Calligra
    - IMPLEMENTED LINKS:
        - https://github.com/benjholla/ColorMixer
        - https://www.shadertoy.com/view/XdSSWd
        - https://www.slideshare.net/DianaLiao3/mixing-paints-con-2016
        - https://www.youtube.com/watch?v=EIecGXs8jqY
- Some version of Subtractive Mixing
    - http://knowpapa.com/cmt/
- Some version of Subtractive Mixing
    - http://trycolors.com/
- Some version of Subtractive RYB Mixing
    - http://www.thebest3d.com/dogwaffle/whatsnew/rybmixer/index.html
- Some color blender
    - https://meyerweb.com/eric/tools/color-blend/#:::hex
- W3S Color Mixer
    - https://www.w3schools.com/colors/colors_mixer.asp
- Opinion Based Mixing (based on the fact that how colors should mix is subjective)
    - Based on some essay I couldn't find again…

ARTICLES ON THE SUBJECT

- "Paper" by FiftyThree App (Implementation Overview and Why)
    - https://www.fastcompany.com/3002676/open-company/magical-tech-behind-paper-ipads-color-mixing-perfection
- The Color Wheel is a Lie!
    - http://www.infocellar.com/Graphics/color-theory.htm
- Manipulating colors in .NET
    - https://www.codeproject.com/Articles/19045/Manipulating-colors-in-NET-Part
- Bahamas Repo Page
    - https://github.com/bahamas10/ryb
        - http://bahamas10.github.io/ryb/about.html

        - http://bahamas10.github.io/ryb/
        - http://www.daveeddy.com/2014/07/01/red-yellow-and-blue/
- Scott Burns
    - http://scottburns.us/reflectance-curves-from-srgb/
    - http://scottburns.us/wp-content/uploads/2015/04/ILSS.txt
    - http://scottburns.us/wp-content/uploads/2015/04/B12-matrix.txt
- Commercial Paint Mixing
    - http://www.easyrgb.com/en/
- Subtractive vs. Additive Mixing Explained Briefly
    - http://www.intropsych.com/ch04_senses/color_mixing.html
    - http://worqx.com/color/color_systems.htm
    - https://isle.hanover.edu/Ch06Color/Ch06ColorMixer.html
- Subtractive vs Additive Explained Lengthy
    - http://lucaskrech.com/blog/index.php/2010/01/22/color-theory-basics-additive-and-subtractive-color-mixing/
    - https://www.colormatters.com/color-and-design/color-systems-rgb-and-cmyk
    - http://wtamu.edu/~cbaird/sq/2015/01/22/why-are-red-yellow-and-blue-the-primary-colors-in-painting-but-computer-screens-use-red-green-and-blue/

Other Links

- https://stackoverflow.com/questions/180/function-for-creating-color-wheels
- http://vis.computer.org/vis2004/DVD/infovis/papers/gossett.pdf
- http://art-si.org/PDFs/Processing/KMreport_10_01.pdf
- http://ieeexplore.ieee.org/document/5673980/
- http://www.cis.rit.edu/people/faculty/ferwerda/publications/2011/blatner11_cic.pdf
- http://www.heathershrewsbury.com/dreu2010/wp-content/uploads/2010/07/ModelingPigmentedMaterialsForRealisticImageSynthesis.pdf
- http://sue.codes/math-art/2015/03/30/color-spaces.html