WHO AM I?

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Colors!
red
red
red
THE ELECTROMAGNETIC SPECTRUM

These waves travel through the electromagnetic field. They were formerly carried by the aether, which was decommissioned in 1897 due to budget cuts.

Visible Light

Other Waves:
- Slinky Waves
- Sound Waves (20 Hz)
  - Audible Sound
  - The Wave

Censored Under Patriot Act

Power & Telephone: 10^15 Hz
Radio & TV: 10^12 Hz
Microwaves: 10^10 Hz
Toasters: 10^8 Hz
IR: 10^6 Hz
UV: 10^4 Hz
Visible Light: 10^2 Hz
Invisible Light: 10^0 Hz
X-Rays: 10^1 Hz
Gamma/Cosmic Rays: 10^0 Hz

Visible: 450nm - 700nm
Orange: 600nm - 650nm
Yellow: 550nm - 600nm
Green: 500nm - 550nm
Blue: 450nm - 500nm
Violet: 340nm - 450nm
Cyan: 450nm - 500nm
Pink: 650nm - 700nm

Other entertaining gremlins include Petty and Enya and Zappa.
pack my box with five dozen liquor jugs

crazy Fredrick bought many very exquisite opal jewels

sixty zippers were quickly picked from the woven jute bag
Color Spaces, Gamuts & Models
99% of sRGB

Retina Display

71% of sRGB

Earlier MacBook Pro
<table>
<thead>
<tr>
<th>Color</th>
<th>Primaries</th>
<th>Relative luminance (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>R G B</td>
<td>100</td>
</tr>
<tr>
<td>Yellow</td>
<td>R G</td>
<td>90</td>
</tr>
<tr>
<td>Cyan</td>
<td>G B</td>
<td>70</td>
</tr>
<tr>
<td>Green</td>
<td>G</td>
<td>60</td>
</tr>
<tr>
<td>Magenta</td>
<td>R B</td>
<td>40</td>
</tr>
<tr>
<td>Red</td>
<td>R</td>
<td>30</td>
</tr>
<tr>
<td>Blue</td>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td>Black</td>
<td>—</td>
<td>0</td>
</tr>
</tbody>
</table>
Color Theory
Color Guidelines
Fix your objectives first

Application
User needs
Interaction
Presentation
cheatsheet: just use these
Upto 6 best,
10 is difficult
12 gives negative returns

Each color should serve a purpose
Luminance contrast between foreground and background

If you can’t do that, border them.
Muted colors for large areas

High saturation color for small areas

Natural colors for most

Bright / dark colors to highlight
Color sequence for data maps
Use same background
PS: Gradients suck (mostly)

If it’s not data:
delete it,
make it grey,
Or mute it.
Color names if you're a girl...

Maraschino
Cayenne
Maroon
Plum
Eggplant
Grape
Orchid
Lavender
Carnation
Strawberry
Bubblegum
Magenta
Salmon
Tangerine
Cantaloupe
Banana
Lemon
Honeydew
Lime
Spring
Clover
Fern
Moss
Flora
Sea Foam
Spindrift
Teal
Sky
Turquoise

Color names if you're a guy...

Red
Purple
Pink
Orange
Yellow
Green
Blue

Doghouse Diaries
"We take no as an answer."
Actual color names if you’re a girl ...

Actual color names if you’re a guy ...

- red
- magenta
- purple
- blue
- pink
- hot pink
- orange
- yellow
- light green
- lime green
- neon green
- green
- aqua
- teal
- blue

5 million colors named
222,500 user sessions
Don’t use red and green in the same interface if you want to address most color deficiency cases.
Be consistent
Thank you