KEEPING COLORS FROM KILLING YOUR PRODUCT

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Christopher Schmitt.
@teleject
• What are the design treatments of the top companies’ online presences?

• Breaking down color.

• Looking at creating color schemes.

• Issues with color and accessibility.

• How to check for color accessibility issues.

• How to prevent color accessibility issues.

• Perform quick site audits, if time allows.
Before that —
Anyone want to showcase their business’ site?
How are companies using design (including color)?
Looked at the top 100 of Fortune 500 sites

https://www.dropbox.com/s/51dgp097danfq9o/Fortune%20500.zip?dl=0
47.1
Average main heading size (px)

http://shorturl.at/bcvxG
91
Sites used sans-serif as main font style

http://shorturl.at/bcvxG
34 Sites used an image carousel

http://shorturl.at/bcvxG
Company site examples
## Alphabet Announces Second Quarter 2019 Results

<table>
<thead>
<tr>
<th>2019</th>
<th>Q1</th>
<th>Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Press release</td>
<td>Press release</td>
</tr>
<tr>
<td></td>
<td>Webcast</td>
<td>Webcast</td>
</tr>
<tr>
<td></td>
<td>Transcript</td>
<td>Transcript</td>
</tr>
<tr>
<td></td>
<td>10-Q</td>
<td>10-Q</td>
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<tr>
<td></td>
<td>PDF, HTML</td>
<td>PDF, HTML</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2018</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4 &amp; fiscal year</th>
</tr>
</thead>
<tbody>
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<td>Press release</td>
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</tr>
</tbody>
</table>

[https://abc.xyz/investor/](https://abc.xyz/investor/)
Alphabet Announces Date of Third Quarter 2019 Financial Results Conference Call

Numbers

2019

Q1
Press release!
Webcast!
Transcript!

Q2
Press release!
Webcast!
Transcript!

10-Q
! H1!

2018

Q1
Press release!
Webcast!
Transcript!

Q2
Press release!
Webcast!
Transcript!

Q3
Press release!
Webcast!
Transcript!

Q4 & fiscal year
Press release!
Webcast!
Transcript!

https://abc.xyz/investor/
‘Embrace the gray areas...and dream big’

Susi Fiedler shares the turning points that helped her overcome fears, shift perspectives and land the presidency of our Europe-Canada business
Inventing for life: passion, purpose and people

Around the world, the 2019 Fellowship for Global Health program contributes to solutions to the most pressing health challenges

LEARN MORE  

https://merck.com
Get a Fresh Perspective

Sysco Foodie delivers insights on today’s trends, inventive recipes, and the latest Sysco product innovations.
Planet-friendly, everyday essentials

Sysco Earth Plus provides customers planet-friendly non-food items that are affordable and reliable.

https://www.sysco.com/ - color contrast check
Delivering a Better Tomorrow

Sysco launches our 2018 Corporate Social Responsibility Report.

VIEW REPORT

https://www.sysco.com/ - images disabled, text selected
Better use of colors means a better product.
Color Theory Terms
Hue
Value
Contrast
Brightness
Saturation
https://en.wikipedia.org/wiki/HSL_and_HSV
Primary Color Systems
Additive Primary
Subtractive Primary
## Different CYMK Blacks

<table>
<thead>
<tr>
<th></th>
<th>CYAN</th>
<th>MAGENTA</th>
<th>YELLOW</th>
<th>BLACK</th>
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</thead>
<tbody>
<tr>
<td>Flat Black</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Rich Black</td>
<td>50%</td>
<td>50%</td>
<td>30%</td>
<td>100%</td>
</tr>
<tr>
<td>Registration Black</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Cool Black</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

[https://www.printi.com/blog/guide-to-cmyk-black/](https://www.printi.com/blog/guide-to-cmyk-black/)
Color Schemes
Color Wheel
Analogous Scheme
Monochromatic Scheme
Gradated Scheme
Complimentary Scheme
Problems with Colors
Color is relative
COLOR IS RELATIVE

Know this, know color, know visual literacy

http://colorisrelative.com/color/
Decide then:

Smoosh: Same or Different?

ColorisRelative.com

http://samesameordifferent.com/
Color Accessibility
1 in 12
Low Vision or Color Blindness
ExxonMobil announces Tripletail oil discovery offshore Guyana

Stabroek Block discovery adds to previous 6-billion-barrel estimate

Read the release

Learn more about ExxonMobil's Guyana operations

https://corporate.exxonmobil.com
ExxonMobil announces Tripletail oil discovery offshore Guyana

Stabroek Block discovery adds to previous 8-billion-barrel estimate
ExxonMobil announces Tripletail oil discovery offshore Guyana

Stabroek Block discovery adds to previous 6 billion barrel estimate

Read the release  Learn more about ExxonMobil’s Guyana operations

http://colorfuzz.com/
ExxonMobil announces Tripletail oil discovery offshore Guyana

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Outlook for Energy

2019 Energy and Carbon Summary

ExxonMobil expands Argentina activities
ExxonMobil announces Tripletail oil discovery offshore Guyana

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https://corporate.exxonmobil.com
Web Content Accessibility Guidelines (WCAG) re: Color & Contrast
Hard to pick a path, remediation for different color blindness...

https://www.w3.org/TR/UNDERSTANDING-WCAG20/visual-audio-contrast-contrast.html
...rely instead on luminance contrast.
From Hex to HSL
https://en.wikipedia.org/wiki/HSL_and_HSV
#ff0000
rgb(255, 0, 0)
hsl(0, 100\%, 50\%)
Comparing colors for accessibility we look at color contrast ratio.

https://medium.muz.li/the-science-of-color-contrast-an-expert-designers-guide-33e84c41d156
(L1 + 0.05) divided by (L2 + 0.05)
Color contrast ratio denoted as 3.4:1, 4:1, 2.1:1, etc.
Minimal recommended contrast ratio
4.5:1 for regular copy
or
3:1 for larger fonts (18pt or 14pt bold)
How do I check for color contrast?
Google Chrome DevTools
The image shows a tool for analyzing color contrast, specifically the Colour Contrast Analyser (CCA). The tool displays the contrast ratio of 1.6:1. The foreground color is #F1B548, and the background color is #DA7C46.

The WCAG 2.1 results are highlighted for compliance with Web Content Accessibility Guidelines. The tool indicates a fail for large and regular text under section 1.4.3 Contrast (Minimum) (AA) and section 1.4.6 Contrast (Enhanced) (AAA).

The Monochromacy section shows samples for different color blindness conditions:
- Achromatopsia (1.7:1) with no color
- Achromatony (1.7:1) with almost no color

The Dichromacy section includes:
- Protanopia (1.7:1) with no red
- Deuteranopia (1.7:1) with no green
- Tritanopia (1.6:1) with no blue

The Trichromacy section provides samples for:
- Protanomaly (1.7:1) with low red
- Deuteranomaly (1.7:1) with low green
- Tritanomaly (1.6:1) with low blue

The tool also includes a sample text showing the contrast for different color blindness conditions.

For further information, visit the Paciello Group's resources page at https://developer.paciellogroup.com/resources/contrastanalyser/.
Contrast Checker

Foreground Color: #7070FF  Background Color: #FFFFFF

Contrast Ratio: 3.85:1

Normal Text

WCAG AA: Fail
WCAG AAA: Fail

The five boxing wizards jump quickly.

Large Text

WCAG AA: Pass
WCAG AAA: Fail

The five boxing wizards jump quickly.

Graphical Objects and User Interface Components

WCAG AA: Pass

Text Input

https://webaim.org/resources/contrastchecker/
How to use

As you type, the contrast ratio indicated will update. Hover over the circle to get more detailed information. When semi-transparent colors are involved as backgrounds, the contrast ratio will have an error margin, to account for the different colors they may be over.

This sample text attempts to visually demonstrate how readable this color combination is, for normal or **bold** text of various sizes and font styles.

**Hint:** Press the up and down keyboard arrows while over a number inside a functional color notation. Watch it increment/decrement. Try with the Shift or Alt key too!

[https://contrast-ratio.com/](https://contrast-ratio.com/)
How do I avoid failing contrast from the start?
CSS Variables + calc() + rgb() = Enforcing High Contrast Colors
CSS Vars, rgb(), & Contrast: Ensuring High-Contrast Colors

CSS Ally Button

Button Background Color

Red: 28
Green: 180
Blue: 130

https://css-tricks.com/css-variables-calc-rgb-enforcing-high-contrast-colors/
Get Code

Want to get started using the Tenon API but not sure where to start? Explore the options listed below that were created by Tenon or our community of users.

Most of the projects listed below are available under the **MIT License**.

Looking for something not listed here or have an idea for an integration? **Give us a shout!** We love working on new integrations.

**Browser Plugins**

- **Tenon-Check for Chrome**: Browser plugin to allow you to test the current page using Tenon within Chrome.
- **Tenon-Check for Opera**: Browser plugin to allow you to test the current page using Tenon within Opera.

[https://tenon.io/get-code](https://tenon.io/get-code)
axe for Web

An open source accessibility rules library for automated testing. Integrate accessibility into your existing testing environment.

What sets axe apart?

https://www.deque.com/axe/axe-for-web/
Color is great.
Apply contrast to all design and content elements — from hover links, form inputs borders, focus rings, and more!
Be proactive in making products accessible, so that they may be usable.
Thank you!

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