GUIDELINES ON ACCESSIBLE VISUAL DESIGN

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Agenda

- Headings and Layout
- Color
- Text
- Links
- Images / Videos / Animations
- Q&A
HEADINGS AND LAYOUT
New 2017 Events from Triangle UXPA!

We are continuing to offer more awesome events this year. Mark your calendars for the events below and stay tuned for new event announcements!

Karen Holtzblatt and The Women in Tech Project

March 29, 2017
6:00 - 8:00 pm at the American Tobacco Campus in Durham

The Triangle UXPA, in partnership with Ladies that UX Durham, is proud to present distinguished author, speaker, and researcher Karen Holtzblatt. She is visiting us from the DC area for this important talk. Karen is CEO of InContext Design, thought leader, industry speaker, author and now Research Scientist at University of Maryland’s iSchool. Karen is known in the UX world for developing Contextual Design and Contextual Inquiry, user-centered design techniques employed and taught by companies and universities world-wide. In recognition of her impact on the field, Karen was awarded ACM SIGCHI’s first Lifetime Award for Practice. Karen knows what it takes to be successful in the world of high tech and has proven her skills in persuading technology and business professionals to change how they go about managing and delivering design.

About Triangle UXPA

The Triangle UXPA was founded in 2006 and is the Triangle chapter of the User Experience Professionals Association. We are focused on building and supporting the local community of practitioners who focus on crafting great user experiences. You can view a short presentation of the history of our chapter prepared for our 10th anniversary here:

Triangle UXPA History 2006-2016

Join the Triangle UXPA

We charge low annual dues for professionals: $29.95 and only $14.95 for students.

Join today!
Headings

• Use one H1 per page
• Brief, comprehensive
• Properly nested
  – H1 > H2 > H3 etc.
Layout / Landmarks

```
<header role="banner">
  <nav role="navigation">
  </nav>
  <main role="main">
  </main>
  <aside role="complementary">
    <form role="search">
    </form>
  </aside>
</header>
<footer role="contentinfo">
</footer>
```
Layout / Landmarks

- Banner
- Main
- Footer
- Aside
- Nav
- Search

You should always have these landmarks but you can only use them once.

These are optional but you can use more than once.
Avoid using color alone to convey information
Avoid using color alone to convey information

Incorrect  Incorrect
Correct    Correct
Avoid using color alone to convey information

Input with success
Success! You’ve done it.

Input with warning
Check the formatting and try again.

Input with danger
Sorry, that username is taken. Try another?
Provide good color contrast

• There should be enough color contrast between text and background for the text to be easily readable.
• Be especially careful with light shades of gray, orange, and yellow.
• You can use free tools to check color contrast.
## Overly Subtle Color Schemes

<table>
<thead>
<tr>
<th>Color Scheme</th>
<th>Too Little Contrast</th>
<th>Sufficient Contrast</th>
</tr>
</thead>
<tbody>
<tr>
<td>gray/white</td>
<td>gray on white</td>
<td>gray on white</td>
</tr>
<tr>
<td>dark gray/light gray</td>
<td>light gray on dark gray</td>
<td>light gray on dark gray</td>
</tr>
<tr>
<td>teal/white</td>
<td>teal on white</td>
<td>teal on white</td>
</tr>
<tr>
<td>sea green/green</td>
<td>sea green on green</td>
<td>sea green on green</td>
</tr>
<tr>
<td>orange/white</td>
<td>orange on white</td>
<td>red–orange on white</td>
</tr>
</tbody>
</table>
Color Contrast Checker

- [WebAim Color Contrast Checker](http://webaim.org/colorchecker) (web)
- [Colour Contrast Analyzer](http://colour-contrast-analyzer.com) (Mac and PC)
- [Tanaguru Contrast-Finder](http://tanaguru.com/en) (web, provides color recommendations)
WebAim Color Contrast Checker

Foreground color: #101010  

Background color: #ffe852  

Contrast Ratio: 15.33:1

Normal Text

WCAG AA: Pass
WCAG AAA: Pass
Sample: I am normal text

Large Text

WCAG AA: Pass
WCAG AAA: Pass
Sample: I am large text

Explanation

Simply select or enter a foreground and background color in RGB hexadecimal format (e.g., #fd3 or #f7da39). Select the lighten and darken options to modify the colors slightly. You can use the color picker to change colors or change luminosity.

http://webaim.org/resources/contrastchecker/
Colour Contrast Analyzer

https://www.paciellogroup.com/resources/contrastanalyser/
Tanaguru Contrast-Finder

Find me the good constrasts, for web accessibility, between these two colors:

Foreground Color: #468847
Background Color: #DF0D8

http://contrast-finder.tanaguru.com
## Tanaguru Contrast-Finder

### Old contrast

<table>
<thead>
<tr>
<th>Foreground</th>
<th>Background</th>
<th>Sample</th>
<th>Ratio</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>hsl(120, 32%, 40%)</td>
<td>hsl(102, 44%, 89%)</td>
<td>Title big size <em>with words in bold</em> Here is some text sample <em>with some words in bold</em> to illustrate the contrast.</td>
<td>3.61029</td>
<td></td>
</tr>
<tr>
<td>rgb(70, 136, 71)</td>
<td>rgb(223, 240, 216)</td>
<td>#468847</td>
<td>#DFDFDB</td>
<td></td>
</tr>
</tbody>
</table>

### New contrast: 40 results (374 colors tested)

<table>
<thead>
<tr>
<th>Foreground</th>
<th>Background</th>
<th>Sample</th>
<th>Ratio</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>hsl(120, 24%, 35%)</td>
<td>hsl(102, 44%, 89%)</td>
<td>Title big size <em>with words in bold</em> Here is some text sample <em>with some words in bold</em> to illustrate the contrast.</td>
<td>4.88288</td>
<td>25.02</td>
</tr>
<tr>
<td>rgb(58, 111, 68)</td>
<td>rgb(223, 240, 216)</td>
<td>#446F44</td>
<td>#DFDFDB</td>
<td></td>
</tr>
<tr>
<td>hsl(120, 16%, 37%)</td>
<td>hsl(102, 44%, 89%)</td>
<td>Title big size <em>with words in bold</em> Here is some text sample <em>with some words in bold</em> to illustrate the contrast.</td>
<td>4.71578</td>
<td>24.04</td>
</tr>
<tr>
<td>rgb(80, 111, 80)</td>
<td>rgb(223, 240, 216)</td>
<td>#506F50</td>
<td>#DFDFDB</td>
<td></td>
</tr>
<tr>
<td>hsl(120, 9%, 39%)</td>
<td>hsl(102, 44%, 89%)</td>
<td>Title big size <em>with words in bold</em> Here is some text sample <em>with some words in bold</em> to illustrate the contrast.</td>
<td>4.54643</td>
<td>11.78</td>
</tr>
<tr>
<td>rgb(91, 111, 91)</td>
<td>rgb(223, 240, 216)</td>
<td>#5B6F5B</td>
<td>#DFDFDB</td>
<td></td>
</tr>
</tbody>
</table>

[http://contrast-finder.tanaguru.com](http://contrast-finder.tanaguru.com)
Color-Blindness Simulator

NoCoffee chrome extension

Visual Disabilities
Color-blindness

Article Contents
- Page 1: Introduction
- Page 2: Blindness
- Page 3: Low Vision
- Page 4: Color-blindness
Color-Blindness Simulator

Color deficiency: Protanopia (red deficiency)
Color-Blindness Simulator

Color deficiency: Achromatopsia (no color)
Typography

- Watch the use of CAPS
- Use a legible font
- Use adequate font size
Avoid Images of Text

A Quick Brown Fox
A Quick Brown Fox
A Quick Brown Fox
Avoid Images of Text

• If possible, use text itself, rather than uploading images of text
• When zoomed, images of text can become illegible
Leading / Line Spacing

• Use legible leading
• The amount of space between lines should be no less than half the character height.
Leading / Line Spacing

Too Little

Too Much

Good
Paragraph Width

- Paragraph width between 60 - 100 characters
Paragraph Width

Too Short

Too Long

Good
Avoid Justified Text

Flush Left/Rag Right

Paragraphs of type can be aligned in several different ways. The axis can be central, left or right. Text can also be set so that both sides of the column are aligned or justified. The unaligned side of the paragraph that creates a more jagged shape is called the “rag.”

Justified

Paragraphs of type can be aligned in several different ways. The axis can be central, left or right. Text can also be set so that both sides of the column are aligned or justified. The unaligned side of the paragraph that creates a more jagged shape is called the “rag.”
Links

• Make sure links are recognizable
  – Links should be underlined
• Ensure link text makes sense on its own
Avoid generic link text

• Click here
• Here
• More
• Read more
• Link to [some link destination]
• Info
Accessible vs Inaccessible Link Text

Unclear Link Text Examples

- Click here for instructions on how to use the new Penn State Web tool.
- Learn more about color and accessibility here and here
- Story 1 (Read More) | Story 2 (Read More)
- Accessibility 101 (Register) | Accessibility 102 (Register)

Usable Link Text

- Instructions for the new Penn State Web tool are available online.
- Learn more about color and accessibility in terms of contrast and color coding
- Story 1, Story 2
- Register for: Accessibility 101, Accessibility 102,
We have web accessibility in mind

*Our mission is to empower organizations to make their web content accessible to people with disabilities.*
Example: Unique styles for different link states

- **Style links to stand out from text**
  Some people can't use a mouse and use only a keyboard to navigate through web pages.

- **Mouse hover style**
  keyboard to navigate

- **Keyboard focus style**
  keyboard to navigate

- **Touch or click style**
  keyboard to navigate

Visible keyboard focus could be a border or highlight that moves as you tab through the web page.
Users should have control over what content they listen to or watch

- Provide a play or pause button on automatically updating content.

Example: Show play/stop and selection controls in carousel design
Avoid flashing or strobing content that could cause seizures

• In general, if the content flashes more than three times per second, is notably large, has bright contrast in the flashes, it may cause a seizure and should be avoided.
Text over images

- If you will design text over images, make sure to have enough contrast.
Q+A
Thank you

“The power of the web is in its universality. Access by everyone regardless of disability is an essential aspect.”

Tim Berners-Lee, creator of the World Wide Web