# Low Vision Solutions for Computer Tasks

# Becoming a Wrapper!

# September 6th, 2017

# 2:30pm-4pm

This broadcast may not be recorded.

Facilitated by

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Developed for Texas School for the Blind & Visually Impaired Outreach Programs

## Outreach Programs Events Update:

- For upcoming webinars: http://www.tsbvi.edu/2015-10-17-20-13-33/webinar-listings
- For upcoming workshops and conferences: http://www.tsbvi.edu/2015-10-17-20-13-33/outreach-workshops-conferences
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## Housekeeping

- Download handouts and sign-in roster
- Send sign-in roster to sobeckb@tsbvi.edu or fax to 512-206-9320
- Make sure you registered and complete evaluation within 60 days including code for ACVREP/SBEC credit
- View captions in a separate window at https://tcc.1capapp.com/event/tsbvi/embed
- The code will be announced during the presentation

## Adobe Connect Webinar Tour

- For tips about screen navigation go to http://www.connectusers.com/tutorials/2008/11/meeting_accessibility/
- Location of pods
- Power Point content included in your handout
- Poll participation – enter response in chat if you cannot access the poll


Link to enter room: http://tsbvi.adobeconnect.com/lowvision/

# Low Vision Solutions for Computer Tasks

## Topics to Cover

- Core Principles
- Hardware Solutions
- Operating System Solutions
- Software Solutions
  - Browser (Your Choice)
  - Microsoft Word
  - PDF

## Core Principles

- Student -- in charge of their e-environment
- Population focus ≤ 4x magnification
  - 4x mag = 16 screens to get lost in
- Keyboard is your friend
- Horizontal scrolling is EVIL!!! … become a WRAPPER!!

## Low Vision Student Behavior

- Hunching over/craning into the screen
- Eye fatigue from glare, etc.
- Cognitive fatigue from concentration, etc.
- Slower than peers completing reading

## Horizontal Scrolling is EVIL!!

- Slow (3.2 x Bruggeman and Legge – 2002)
- Inefficient
- Should be avoided (Cappel & Huang, 2007)
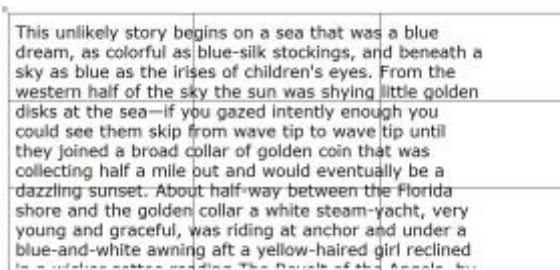- Tracking and backtracking problems

## 3x Magnification = 9 Screens



Figure 1: Text box containing a long piece of text

# No Horizontal Scrolling

The unlikely story begins on a sea that was a blue dream, as colorful as blue-silk stocking, and beneath a…

# Hardware Solutions

- Get a bigger monitor (to a point)
- Change **brightness** of monitor
- Change to Matte screen
    - Less Glare
    - Less Contrast & Color Vibrancy
    - Less Sharpness
- Change to Non-Glare screen (touchscreen)
    - **More Glare**
    - More Contrast & Color Vibrancy
    - More Sharpness

# Operating System Solutions

- Change System Resolution
- Change Focus Ring & Cursor Width (Ease of Access – Make computer easier to see)
- Change Cursor, Mouse Pointer (Personalize)
- Changes Windows theme (Personalize)
    - colors, text size, scroll bars, menus

# Screen Resolutions

- 1920 x 1080 (HDMI) – ~2 million pixels – 1x mag
- 1280 x 720 – ~ 920k pixels – 2x mag
- 800 x 600 –  480k pixels –  4 x magnification *
- Try to keep aspect ratio
- All with no horizontal scrolling

# Applications - Browser

- Change default font & size, minimum size
- Change color of fonts, background, links
- Reader View (Firefox, Safari. Chrome-extension)
- Turn styles off
- Look for mobile version of site (m.gmail.com)
- Extensions Stylish
    - change letter-spacing, line-height, word-spacing.

## Microsoft Word

- Use Web Layout, zoom font (control + mouse wheel)
- Change Font Size and Margins to edit & print
- Productivity Ribbon
- Change letter & line spacing
- Hy-phen-a-tion – perhaps

## PDF Solutions

- VIP Reader
- Acrobat Reader
    - Reflow – Control + 4 (view > reflow) … Makes you a Wrapper!!
    - Zoom – Control + Mouse Wheel  (view > zoom)
    - Change document colors (edit > preferences > accessibility)
    - Control page display/scrolling/page gaps (view > page display)

## Resources

- Accessibility Requirements for People with Low Vision
- Overhead of Horizontal Scrolling - Nose to the Page
- CSUN: Browser zoom sucks for low vision users
- Stylish Extension Chrome, Firefox, Safari (Google search)

This project is supported by the U.S. Department of Education, Special Education Program (OSEP).  Opinions expressed here are the authors and do not necessarily represent the position of the Department of Education.

Figure 2: IDEAs That Work logo and OSEP disclaimer

Figure 3: The Texas School for the Blind and Visually Impaired logo