

# Mobile Accessibility Testing and Resources

## Presenters:

- John Toles
- Rayianna Daniels
- Johan Rempel

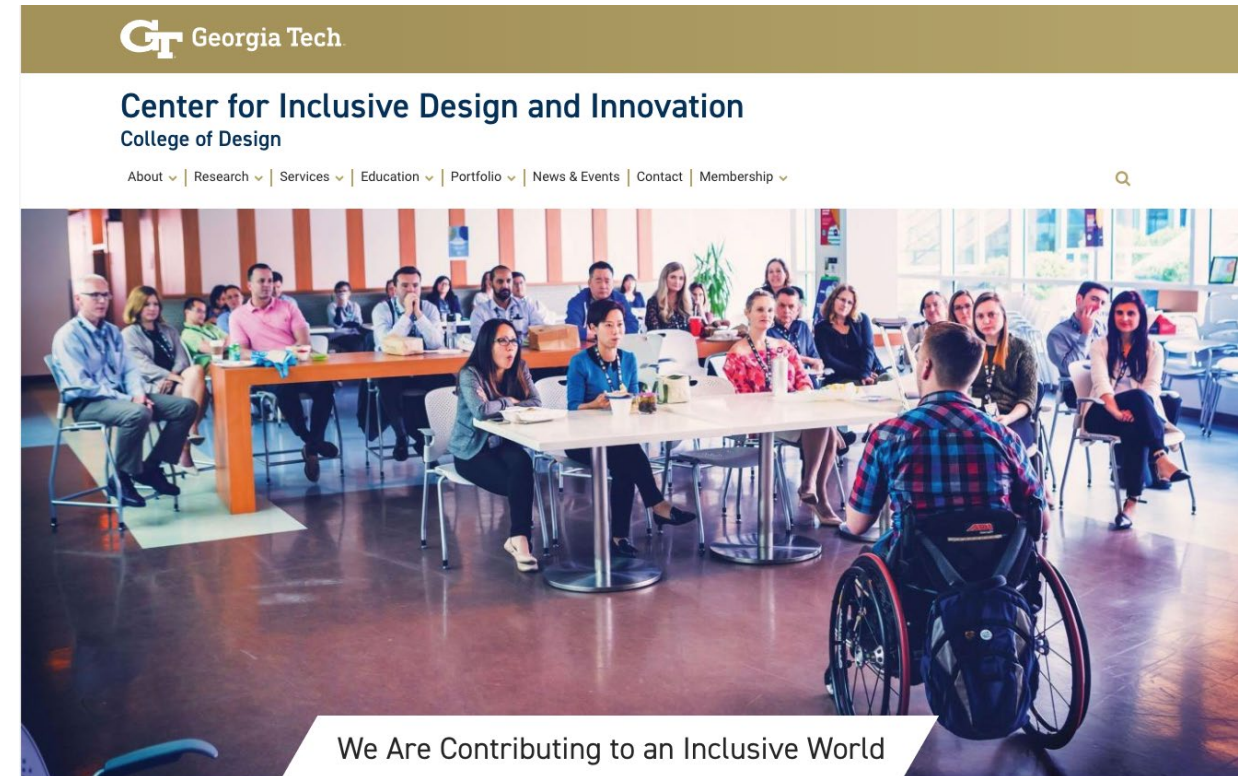
# Live Captions Provided

## Two Options:

1. Access StreamText link available in the “Chat” (“Chat” control in Zoom toolbar)
2. Access the “Closed Captions” option (“Closed Captions” control with “CC” above it in Zoom toolbar)



- Research (disability-related)
- Accessibility Consulting – ICT and UX
- Braille Services
- Captioning and Described Audio Services
- Professional E-Text Producers
- Certified Assistive Technology Team
  - Tools for Life is celebrating 30 years of service in 2021!



# Goals for Today's Presentation

Upon completion of this webinar, participants will be able to:

1. Identify a peripheral device that can be used for testing on mobile
2. Identify two accessibility features within the iOS that map with WCAG 2.1
3. Identify two testing tools used for testing on mobile

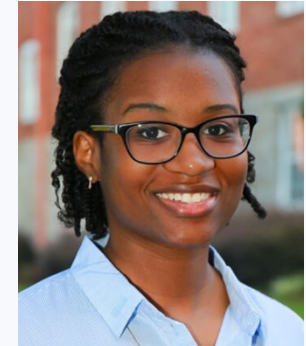


# Today's Presenters

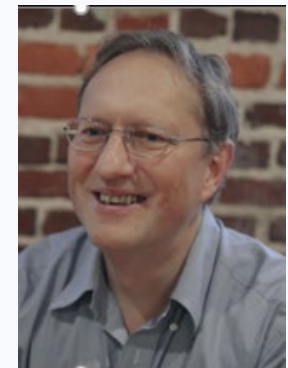
John Toles, Digital Accessibility Specialist - CIDI



Rayianna Daniels, Digital Accessibility Specialist - CIDI



Johan Rempel , ICT-UX Quality Assurance Mgr - CIDI



# Mobile Devices and Peripherals



# When Testing with Mobile

## Factors to Consider

- Analytics
- iOS/Android Versions
  - Available features in each
- Devices
  - Screen sizes and available features
- Bluetooth Keyboards



# Common Mobile Accessibility Features

- Screen Reader
- Magnifier
- Color Settings
- Text Settings
- Captioning & Video Description
- LED/Vibration Alerts
- Switch Control





# iOS and Android Testing

## iOS

- iPhone

## Android

- Google Pixel - stock Version of Android
- Samsung Galaxy
- Many other devices use custom versions

Keeping your device's OS updated ensures that you have the latest fixes and features available for testing



# Testing with Peripheral Devices

Compatible Bluetooth Keyboard

Universal Mobile Keyboard (from Microsoft)

Keyboard Shortcuts

- [Essential Shortcut Keys with iOS](#)
- [Essential Shortcut Keys with Android](#)



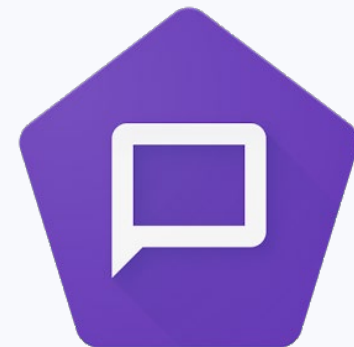
# Gestures for iOS/Android

- Single finger swipe - move between items
- Two-finger swipe up – read screen from the top
- Two-finger tap – pause reading
- Double-tap – activate selected item

[Learn VoiceOver gestures on iPhone](#)

[Use TalkBack gestures](#)

[Use the TalkBack tutorial](#)



# Mobile Accessibility Demonstration

# Mobile Accessibility Guidelines

# Mobile Specific WCAG Guidelines

## WCAG 2.1

Many existing WCAG 2.0 guidelines could apply to mobile devices and content meant for mobile. In 2018 the W3C released an updated set of guidelines to better represent the landscape of available devices and user agents. This update expanded the guidelines to include specific considerations for mobile devices.

[Link to the WCAG 2.1 Guidelines](#)

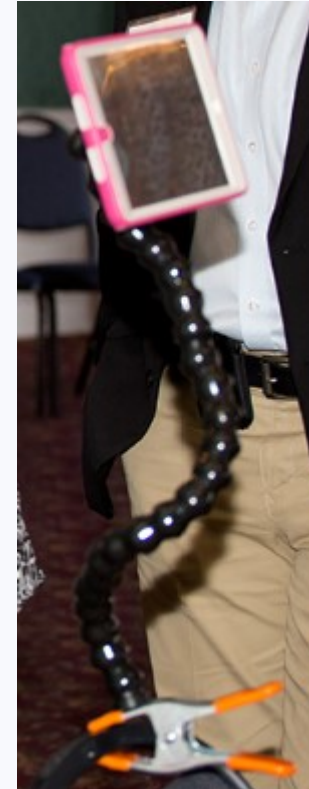


# Mobile Specific WCAG Guidelines - Orientation

## 1.3.4 Orientation (AA)

Content does not restrict its view and operation to a single display orientation, such as portrait or landscape, unless a specific display orientation is essential.

Helps users whose devices are in a fixed mount and users who experience hand tremors.



# Mobile Specific WCAG Guidelines - Reflow

## 1.4.10 Reflow (AA)

Content can be presented without loss of information or functionality, and without requiring scrolling in two dimensions for:

Vertical scrolling content at a width equivalent to 320 CSS pixels.

Horizontal scrolling content at a height equivalent to 256 CSS pixels.

Ensures that content can adapt to the screen size of the device.



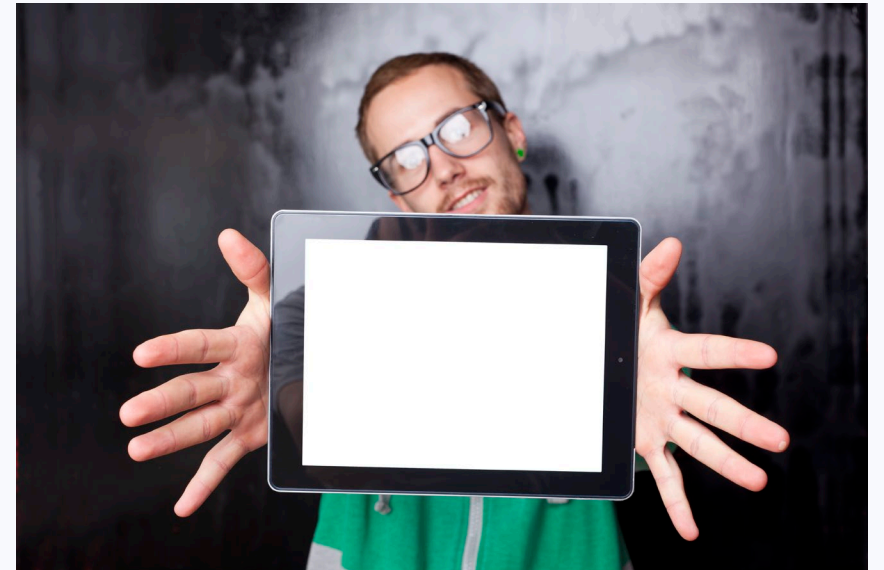
# Mobile Specific WCAG Guidelines – Gestures/Motion

## 2.5.1 Pointer Gestures (A)

All functionality that uses multipoint or path-based gestures for operation can be operated with a single pointer without a path-based gesture, unless a multipoint or path-based gesture is essential.

## 2.5.4 Motion Actuation (A)

Functionality that can be operated by device motion or user motion can also be operated by user interface components and responding to the motion can be disabled to prevent accidental actuation.



# Mobile Specific WCAG Guidelines – Target Size/Input

## 2.5.5 Target Size (AAA)

The size of the target for pointer inputs is at least 44 by 44 CSS pixels.

Ensures users can easily activate controls by making the easy to see and touch.

## 2.5.6 Concurrent Input Mechanisms (AAA)

Web content does not restrict use of input modalities available on a platform except where the restriction is essential, required to ensure the security of the content, or required to respect user settings.



# Key Areas of Focus

## Visible Focus

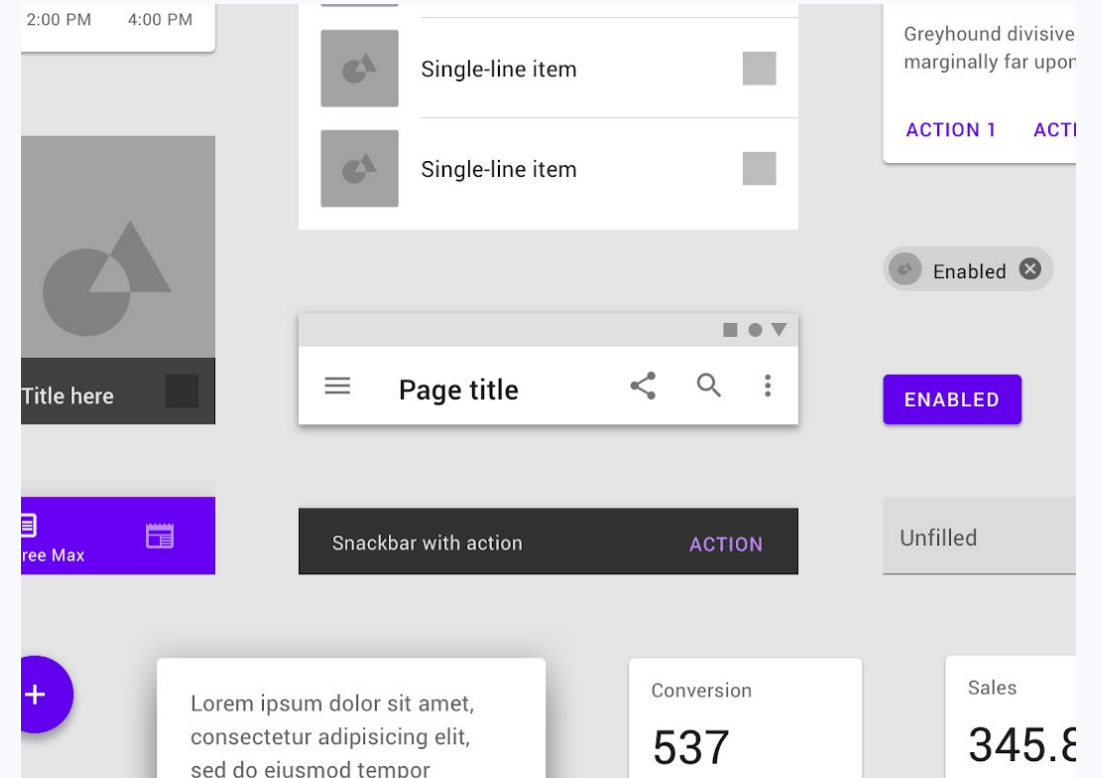
## Color Contrast

- 4.5:1 or greater for regular font
- 3:1 or greater for larger font
- 3:1 or greater for UI Components

## Structure

- Headings
- Labels
- Focus Order

## Device Orientation

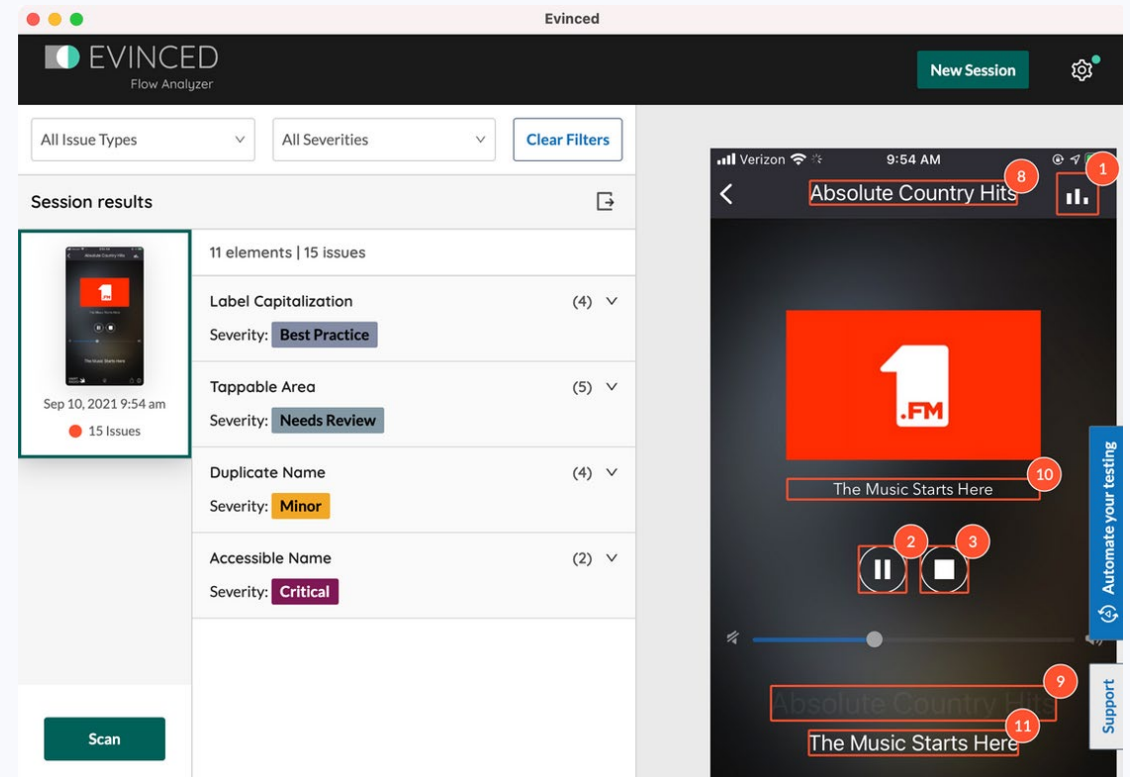


# Mobile Accessibility Testing Tools



# FlowAnalyzer by Evincd

- Connect to device from desktop
- Highlights accessibility issues within native apps
- Supports multiple operating systems
- Exportable report of findings



# Google Accessibility Scanner for Android

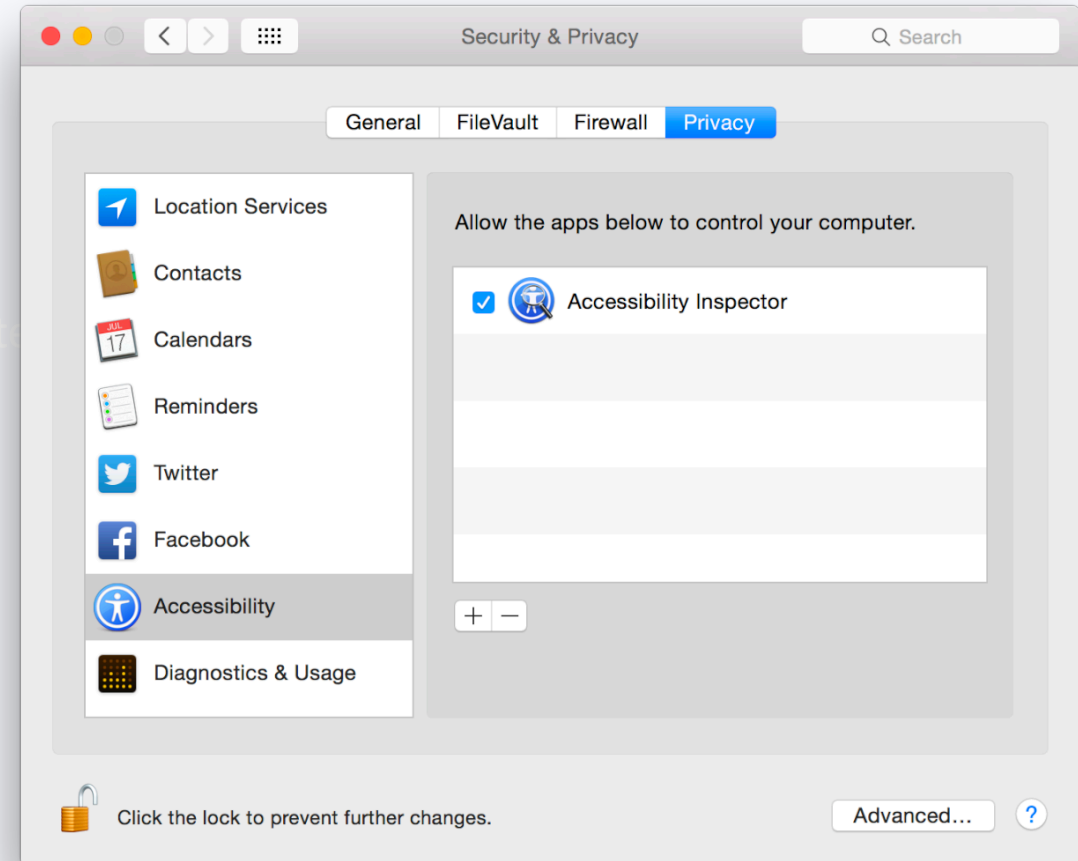
- Suggests accessibility improvements
  - Great for beginners
- Highlights problem areas
- Lists issues based on category or by application screen



# XCode Accessibility Inspector

- Included with XCode
- Displays information about object on hover
  - Values
  - Accessibility hierarchy
  - Action methods

Click to add to



# Browser Inspector Tools

- Chrome, Firefox, Safari
- Great for testing web-based apps
  - in absence of mobile device
- Limited capability



## UAAG 2.0 (User Agent Accessibility Guidelines)

- Related to Mobile browsers and native apps
- Reference for Mobile Accessibility
- Provides guidance on mobile user interfaces
- URL: <http://www.w3.org/TR/UAAG20/>

# Mobile Accessibility Resources

- W3C Mobile Web Application Best Practices  
<http://www.w3.org/TR/mwabp/>
- WCAG 2.1 Final Recommendation  
<https://www.w3.org/TR/WCAG21/>
- W3C Mobile Accessibility Task Force  
<http://www.w3.org/WAI/GL/mobile-a11y-tf/>
- BBC Mobile Accessibility Guidelines  
<http://www.bbc.co.uk/guidelines/futuremedia/accessibility/mobile/about>



# Questions???

