



# iOS 8 Built-In Accessibility for Visual Impairments

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# What We'll Cover

- **Introductions**
- **About Apple Devices & iOS Software**
- **Demo/Hands on Features of Built-In Accessibility**
  - Color Enhancement Features
  - Large Text/Zoom Features
  - Speak Screen/ Siri
  - VoiceOver
  - Braille Displays
  - Resource Links

**Q&A/Hands-on practice**

# INTRODUCTIONS



# About the ATI

- Services for the Mason Community
  - Accessible Text, Accessible Media
  - Web Accessibility
  - AT Assessments
  - Training
  - Under Compliance, Diversity & Ethics
- Services Beyond the Mason Community
  - Accessible Text
  - Training/Assessments
  - Other services as needed

Visit <http://ati.gmu.edu>

# iOS Devices

- iPad (Latest version: iPad Air 2, iPad Mini 3)  
<http://www.apple.com/ipad/compare/>
- iPod Touch (Updated to Retina Display)  
<http://www.apple.com/ipod-touch/>
- iPhone (Latest version: iPhone 6/6Plus)  
<http://www.apple.com/iphone/compare/>

For this demonstration, I'm using the iPad Mini 2 with updated iOS 8.1.1  
<https://www.apple.com/ios/what-is/>



# Device Pricing

- iPad Air 2: 16 GB - \$490-\$500  
64 GB - \$600- \$650
- iPad Mini 3: 16 GB - \$390- \$400  
64 GB - \$490- \$500
- iPod Touch: 16 GB - \$190- \$200  
64 GB - \$290- \$300
- iPhone 6/6 Plus: 16 GB - \$199- \$299 (With carrier)  
64 GB - \$299- \$399


Do your research and compare!

# NEW iOS 8 Accessibility Features

- Word Prediction- Increased efficient word prediction
- Speak Screen- Speaks the screen of text when enabled in Accessibility Settings
- High Quality English Voice- Alex (Works with Speak Screen- Download in Voices Settings)
- Grayscale Color Enhancement/Enhanced Zoom Features



# Accessibility - Color Enhancements

- Navigating the Accessibility Menu
  - Settings on Home Screen 
  - General
  - Accessibility
- Vision Menu
  - Invert Colors
  - Grayscale (NEW)
  - Button Shapes
  - Increase Contrast Settings

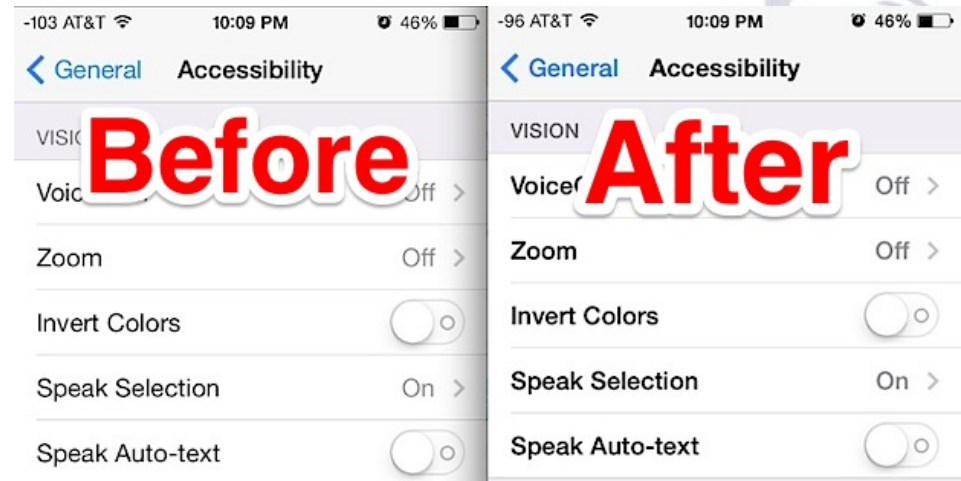


Demo & Practice



# Accessibility – Large Text Enhancements

- Accessibility Vision Menu:
  - Larger Text : Increase from 20pt to 56pt text in Mail, Notes, Contacts, Messages, and Calendar
  - Bold Text
  - Reduce Motion

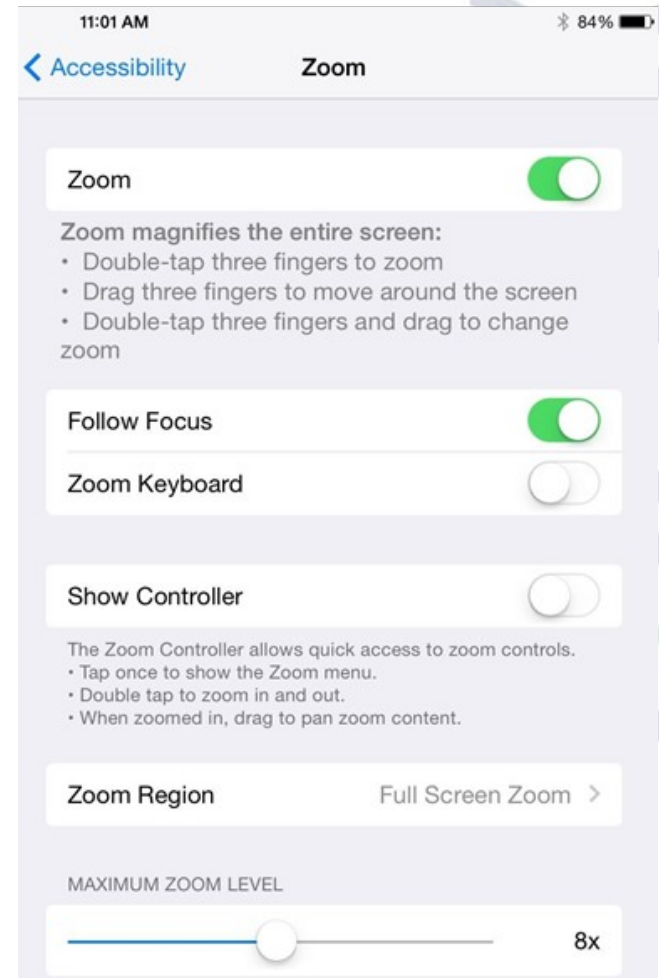


Demo & Practice

# Accessibility – Vision

- Vision Menu
  - Zoom (Magnifies the entire screen)
    - Double Tap 3 fingers to open the Zoom Menu (NEW)
      - Zoom In
      - Window Zoom
      - Choose Filter
      - Show Controller
      - Zoom Slider
  - Drag 3 fingers to move around the screen

## Demo & Practice



# Accessibility- Speak Screen

- Enabling Speak Screen (NEW)
  - Swipe 2 fingers from the top of the screen down
  - Speak Screen will be automatically enabled and the Speak Screen reading bar will be activated on the screen.
  - Automatically start reading in any app with text content.
- Navigating the Speak Screen Reading Bar
  - Pause/Rewind/Fastforward
  - Change speaking rate
  - Close



Demo & Practice

# Accessibility – Intro to Siri

- Apple's Voice Dictation Software
- Example Features
  - Send Messages & Emails
  - Create Reminders
  - Schedule Meetings
  - Play Music
- Siri knows what you say and what you mean!
- Access Siri by pressing the home button for 3 seconds

You Tube Video of Latest Siri Features:

<https://www.youtube.com/watch?v=a8nAP3Cltus>

More information about Siri features:

<https://www.apple.com/ios/siri/>

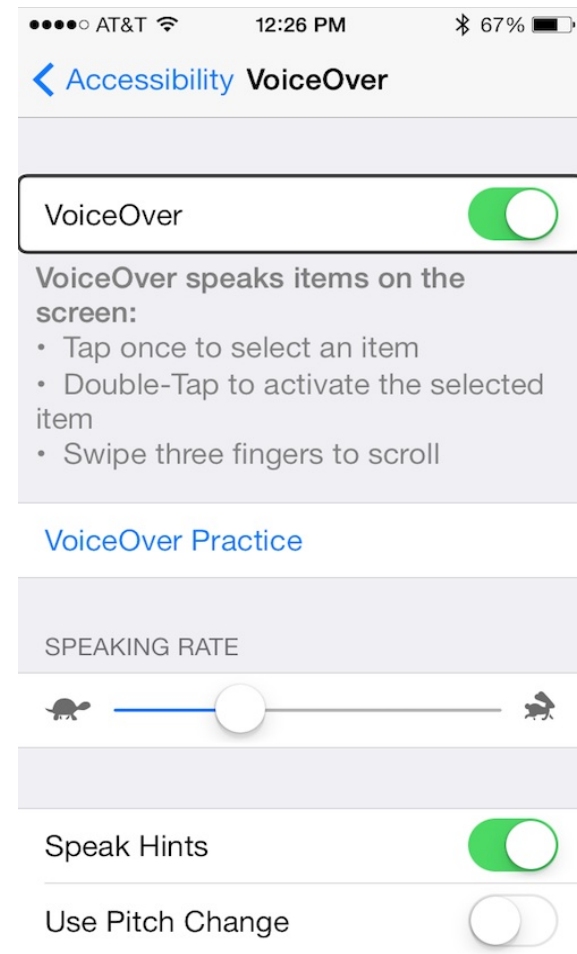
# Accessibility – VoiceOver

- Same gesture-based screen reader that is available on Mac OS
  - Available on the iPad, iPhone, and iPod Touch
  - Support for 30 different languages
- **Very important feature**: Can be enabled without sighted assistance using Siri (iOS 8)

# Accessibility – VoiceOver, Cont.

## - Example Features

- Easy to use gestures
- Provides access to all menus and apps
- Access to Email & Messages with character echo
- Speak Notifications
- Much more!



# Starting and Stopping VoiceOver

- 2 Ways to start and stop Voice Over
- 1) Navigating to the Accessibility Menu
  - VoiceOver (Toggle)
  - Simply swipe the toggle switch to turn on VoiceOver
- 2) Use Siri
  - Hold down the menu button for 3 seconds
  - Ask Siri to start Voice Over “Start Voice Over”

Demo & Practice

# VoiceOver Beginning Gestures

- Tap (Touch) Gesture
  - Place finger anywhere on the screen and tap
  - Hear audio cue (beeping) in an open area
  - Encounter an item, Voice Over will announce the item
- Dragging Gesture
  - Simply drag your finger across the screen to encounter elements (buttons, toggle settings)



# VoiceOver Gestures, Cont.

- Flick Gesture
  - Brush from left to right across the screen to move to items
  - Flick from the left to right to go back
- Double Tap Gesture
  - To activate an app, double tap anywhere on the screen
  - Used to activate buttons and toggle settings

# VoiceOver Gestures, Cont.

- Scrolling
  - 3 finger flick right and left to scroll
  - 3 finger flick up and down to scroll
- Spelling
  - 1 finger flick down quickly once you are on a word

# VoiceOver Gesture Resources

- Hadley School for the Blind: You Tube Video  
[http://www.youtube.com/watch?v=WKzdHH\\_kNcw](http://www.youtube.com/watch?v=WKzdHH_kNcw)
- Audible Sight: List of Gestures  
[http://audiblesight.com/?page\\_id=1505](http://audiblesight.com/?page_id=1505)
- Using the Rotor Feature in iOS 7: You Tube Video  
[http://www.youtube.com/watch?v=HaU\\_uhZl7ZQ](http://www.youtube.com/watch?v=HaU_uhZl7ZQ)

# Braille Displays & iOS

- Compatibility of iOS Devices with Braille Displays
  - iPhone (3Gs) or later
  - iPad Air & Mini
  - iPod (3<sup>rd</sup> gen) or later
  - Latest iOS software installed
- Support for more than 40 wireless Braille displays
  - Freedom Scientific
  - HumanWare
  - GW Micro
- Support for 25 + Braille Table Languages

For complete list of supported displays & languages, visit:

<https://www.apple.com/accessibility/ios/braille-display.html>

# Pairing Braille Display with iOS Device

- Focus 40 Blue Classic (Freedom Scientific)
  - Out of the box connectivity (no extra software to install)
  - USB & Bluetooth connectivity
  - User friendly 8 dot keyboard
  - Compact, easy to carry design
- For more information on Focus 40 Braille displays, visit:

<http://www.freedomscientific.com/Products/Blindness/Focus40BrailleDisplay>

# Pairing Braille Display, Cont.

- 3 Things You Need to Know Before Pairing
  1. How to set the display for Bluetooth communication
  2. How to set the display so that it is discoverable by another device
  3. The Bluetooth pairing code for device
- Vary from Device to Device
  - HIMS & Freedom Scientific Code: 0000
  - Humanware: 1234
  - Contact the manufacturer for correct pairing code!

# Steps for Pairing Display

1. Make sure that VoiceOver is turned on.
2. Make sure that your display is turned on and discoverable (Open VoiceOver Braille Settings on iOS device).
3. If Bluetooth is not activated, you will be prompted to turn it on in the Braille settings.
4. Once Bluetooth is on and has found the display, select the display. You will be prompted to enter the pairing code.
5. Enter the pairing code and select OK.

# Braille Display Resources

- You Tube Pairing Video- Step by Step with iOS  
[https://www.youtube.com/watch?v=1A\\_XdJipwYo](https://www.youtube.com/watch?v=1A_XdJipwYo)
- Focus 40 Blue Classic Navigation Keystrokes:  
<http://support.apple.com/en-us/HT202123>



# Q & A/ Demo

- Additional questions, email: [srobbin3@gmu.edu](mailto:srobbin3@gmu.edu)
- Presentation Link:  
<http://ati.gmu.edu/training/presentations/>
- Website: <http://ati.gmu.edu>



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