

Android Accessibility: A Crash Course

GATE 2019

CREATING THE NEXT®

Center for Inclusive Design and Innovation



CIDI creates practical solutions that work, with a focus on utility, ease of use, and high quality.

- **Accessibility Consulting** focuses on organizational accessibility needs with evaluation, technical assistance, customer support, and web accessibility solutions.
- **Braille Services** produces customized projects from both print materials and electronic text including partial books and chapters or graphics
- **Captioning Services** makes classrooms, meetings, labs and other audio environments fully accessible for deaf or hard-of-hearing.
- **Professional E-Text Producers** provide high-quality e-text in many formats such as PDF, DOC, DAISY, and HTML.
- **Certified Assistive Technology** team provides on-site and remote assessments, demonstrations, training and technical assistance for education, work, and daily living environments.

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Tools for Life

Tools for Life, Georgia's Assistive Technology Act Program, is dedicated to increasing access to and acquisition of assistive technology (AT) devices and services for Georgians of all ages and disabilities so they can live, learn, work and play independently and with greater freedom in communities of their choice.



Begin with the End in Mind



A Crash Course



What is Android?



ANDROID

Disclaimer:

The Android operating system is very fragmented and not all accessibility features are available on all devices.

The demonstrations in this presentation focus on features on the Galaxy Tab S5e tablet.

Accessibility Built In

- Non-visual Access
- Visual Access
- Hearing
- Physical
- Find in Settings > Accessibility (activate accessibility options by pressing power and volume up at the same time; this must be activated in the accessibility menu first)

Non-Visual Access

Voice Assistant

- Non-visual access method
- Great tutorial
- Customizable pitch and speech rate (voices are limited)
- Customize experience with typing, single tap activation, and spoken passwords

A Touch of Accessibility

- Gestures make the screen reader more functional
 - Reading mode – 3 fingers up/down
 - Interaction – 3 fingers left/right
 - Jump to top/bottom – 1 finger up and down/down up
 - Read all – tap with 3 fingers



Additional Gestures

For other non-Samsung Android devices:

[https://support.google.com/accessibility/android/answer/6151827?
hl=en&ref_topic=3529932](https://support.google.com/accessibility/android/answer/6151827?hl=en&ref_topic=3529932)

Low Vision Accessibility

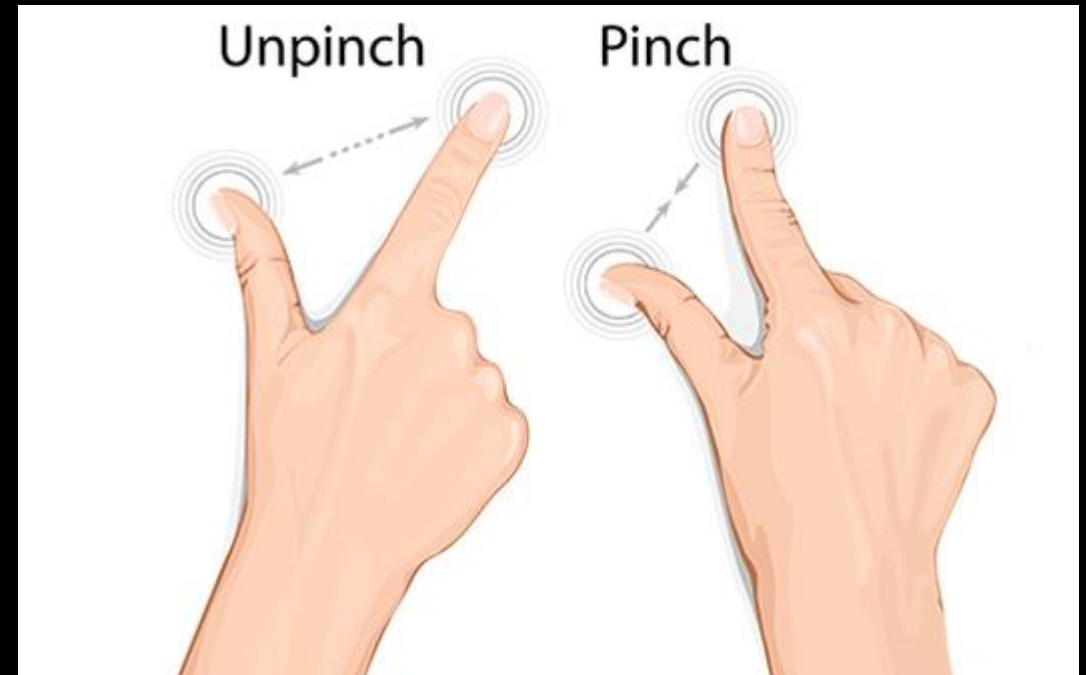
Visual Access



- Text manipulation (large font, font style, high contrast)
- Color manipulation (features for color blindness, inverted colors, color filters)
- Navigation of the screen (color IDs, button shapes, keyboard options, large pointer)

Magnifier

- Two options
 - Magnifier box
 - Full screen
- Fullscreen is easy to activate once selected in the accessibility (1 finger triple tap, maneuver with two fingers)
- Magnifier box can be moved around with two fingers



Auditory Access

Features for Hearing Access

- Sound detection
 - Baby crying
 - Doorbell
- Mute all sounds
- Mono audio
- Subtitle options (Google and Samsung)
- Flash notifications

Dexterity Related Accessibility

Physical Access

Universal switch

- Attached a corded or blue tooth switch for access
- Use switch control using the camera or a screen tap

Touch assistant

- Provides on screen gestures and controls
- Customizable options (gestures, controls, etc)
- Can change to be contextual (options change for camera, contacts, phone, etc)

Physical Interactions

- Block touch interactions/touch
- Touch and hold delay
- Tap duration
- Ignore repeated touches

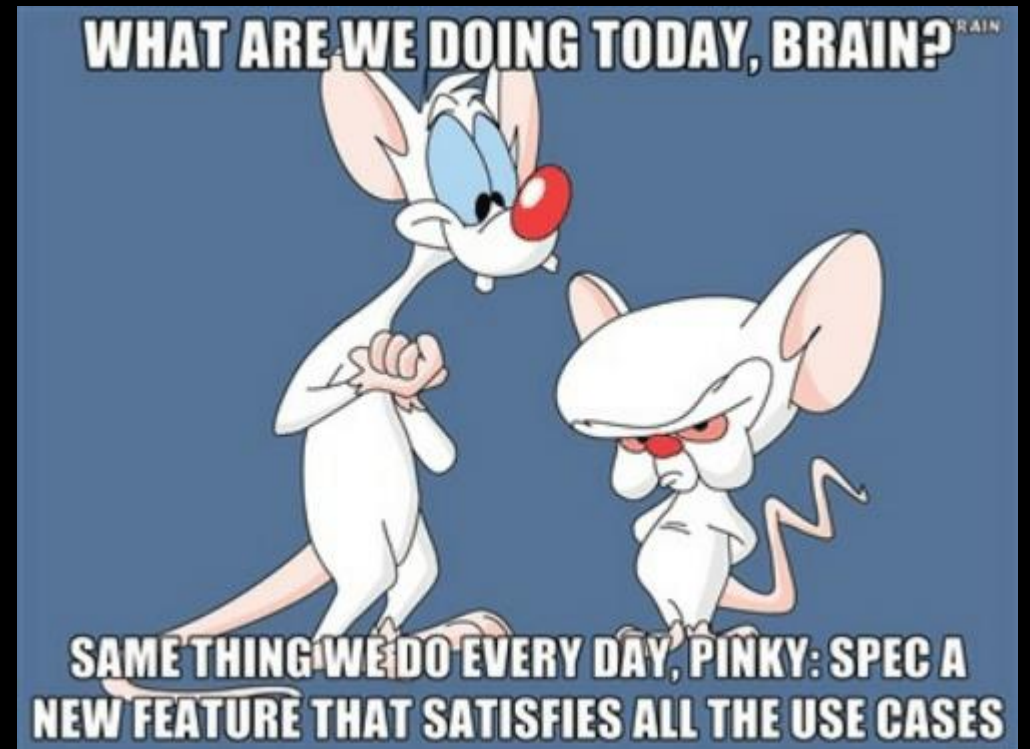
Voice Access

- Comes pre-installed on some devices
- Can be downloaded as an app
- Made by Google
- Full control of device with the voice
- Works similarly to Dragon



Other Useful Access Features

- Notification Reminders
- Manage notifications
- Notification reminders
- “Wind down”
- Monitor screen time
- “Daily Board”
- Folder background color



Interacting with Your Environment

- Google Assistant
- Environmental controls, SmartThings, Google
- Google Lend-OCR, web search, translation
- Duo

Samsung Bixby

- Virtual assistant
- Relegated to Samsung devices
- Same functionality as Google Assistant
- Samsung is pushing

**Even with Android, there is still an
app for that**

TFL App Finder Database

Search by:

- Price
- Category
- Operating system
- Free!

www.gatfl.gatech.edu



Best Practices

- Never be afraid to explore and customize!
- Peer support groups offer lessons
- Contact us!
- Can't find an accessibility feature? Try a third party app

Questions?
Comments?
Quips?
Queries?
Quandaries?

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