Learn More and Do More: Exploring Accessibility and Apps for Android

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Tools for Life
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All about Android

When it comes to accessibility features and apps, Apple iOS dominates everything we see and do. But did you know that the Android system has over 12,000 various products on the market? With so many to choose from, we can only wonder if the Android platform can support people with disabilities with daily tasks and through the transition process.

If you've always wanted to learn more about Android, then this session is for you! Presenters will provide an overview of the Android system, explore the built-in accessibility features and share some apps that can assist with reading, writing, organization, computer and environmental access.
Agenda & Learning Objectives

1. As a result of this activity, the participant will be able to identify the difference between Apple iOS and Android systems.

2. As a result of this activity, the participant will be able to name 3 native Android accessibility features.

3. As a result of this activity, the participant will be able to identify 5 apps that can benefit people with disabilities.

- A Closer Look at Android
- Discuss Android Pros and Cons
- Explore Android Devices & Accessibility
- Android and Access
- Our Favorite Android Apps
You Don't Have to Pick One
Be Informed of Your Options

Buddies!
A Closer Look at Android
What Is Android?

- Android is an operating system based on the Linux kernel with a user interface based on direct manipulation, designed primarily for touchscreen mobile devices such as smartphones and tablet computers, using touch inputs, that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard. Despite being primarily designed for touchscreen input, it also has been used in televisions, games consoles, digital cameras, and other electronics.

- As of 2011, Android has the largest installed base of any mobile OS and as of 2013, its devices also sell more than Windows, iOS and Mac OS devices combined.

- As of July 2013 the Google Play store has had over 1 million Android apps published, and over 50 billion apps downloaded.

Wikipedia
Android is popular with technology companies which require a ready-made, low-cost and customizable operating system for high-tech devices. Android's open nature has encouraged a large community of developers and enthusiasts to use the open-source code as a foundation for community-driven projects, which add new features for users.

Wikipedia
The version history of the Android mobile operating system began with the release of the Android beta in November 2007. The first commercial version, Android 1.0, was released in September 2008.

Since April 2009, Android versions have been developed under a confectionery-themed code name and released in alphabetical order:

- Cupcake (1.5)
- Doughnut (1.6)
- Eclair (2.0–2.1)
- Froyo (2.2–2.2.3)
- Gingerbread (2.3–2.3.7)
- Honeycomb (3.0–3.2.6)
- Ice Cream Sandwich (4.0–4.0.4)
- Jelly Bean (4.1–4.3)
- KitKat (4.4–4.4.2)
Facts about Android

• The Android operating system was first developed by Google in 2008 in response to Apple’s iOS, which dominated the smartphone market at the time.

• Since 2008, the Android OS has proven itself a worthy competitor and officially took over as the market leader in the fourth quarter of 2010.

• The number of new Android devices being activated each month continues to climb at a staggering rate.
The World's Most Popular Mobile OS

- Android powers more than a billion phones and tablets around the world.

- It’s customizable, yet easy to use, and since it's made by Google, it works seamlessly with all your favorite Google apps.
Android is a Mobile Powerhouse
Statistics on Android Users

Number of Android smartphone users in the United States from 2010 to 2014 (in millions)

- 2010: 15
- 2011: 35.7
- 2012: 52.8
- 2013*: 64.3
- 2014*: 76
Smartphone Users Pick Android

47% of People Use Android Smartphones

30% of People Use iPhones

23% Use Other Smartphones
Android vs iOS

• The major difference between Android and iOS is that Android is based around Open Source software and iOS is proprietary software.

• This means that anyone can develop applications for Android without paying overpriced fees.

• This in turn means developers can charge less for apps or offer them for free.
Pros and Cons of Android/iOS

- **iOS** provides the user with a universal experience.
  - If you are familiar with one iPhone, you can pick up any other iPhone and know exactly how to use it
  - Developers only have a few platforms to design for

- **Android** allows for deep customization and personalization
  - Users can replace keyboards, ringtones, wallpapers, even the user interface
  - Users are able to access and control more features, as well as how they operate
Exploring Android Devices & Accessibility
Samsung Galaxy Tab 3

• 7 inch screen
• Open one screen at a time
• Camera for photos and videos
• Ability to organize apps
• Similar to the Galaxy smartphone
• Starts at $179
Samsung Galaxy Note 8.4

- Built in accessibility features
- Multi Windows
  - 2 Screens
- Customize dashboards
- 8.4 inch display
- 10 hours Internet time
- eMeeting
  - Share screen
- Starting at $349
Samsung Galaxy S4

• Air Gesture
  – sensor at the top of the device, allows you to answer calls just by waving your hand
  – browse through photo albums and web browser tabs by using left and right hand gestures

• Air View
  – preview photos in an album, for example, by hovering any one of your fingers a few centimeters above the screen

• Smart Stay and Smart Scroll
  – Uses your eyes
  – Pauses when you look away or continues to scroll following your eyes
Easy Mode

- In Settings under Home Screen Mode
- Has three home screens
- The main home screen has non removable widgets for the time, date, and weather. You will also find six apps to choose from that have much larger icons
- The left home screen is dedicated to calling
  - Can select up to nine contacts
- The right home screen includes 9 apps that you can customize to whatever you want
- Still have an app drawer
  - All apps are spelled out and in alphabetical order.
- The settings menu and camera interface is also simplified
Android Tablets Accessibility

- Accessibility features are not all built in
  - Talkback, Kickback, and Soundback
  - Gesture Feature in Jellybean
  - Eyes - free keyboard
  - IDEAL Web Reader for internet
- What operation system is tablet running
  - KitKat, Jellybean, Ice cream sandwich, Honeycomb, Gingerbread
- Google Play Store to buy apps
  - Must have Gmail address
  - Can use Amazon gift cards
- Customize features
  - Pick from several kinds of keyboards
Accessible Android Apps

- Big Launcher- icons look darker and text is larger
- Vlingo Virtual Assistant and Iris
- Text to Speech Toy- Text-to-Speech
- Eyes-free keyboard
- IDEAL web reader
- Code Factory - Mobile Accessibility Suite for AT&T users
  - 12 different apps / 30 day free trial -$99
  - www.androidaccess.net
android Access: Accessible Android apps and news for the Blind and Visually Impaired

Welcome to Android Access, your portal to information on accessible Android apps and programs for the blind and visually impaired. We're excited to be a part of the Android community, and look forward to your comments, feedback, and submissions. If you're new to Android, check out our Getting Started page. Keep up to date with the latest reviews and news by following @AndroidAccess on Twitter.

Browse by category

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Accessible Android

Get Maximum Eyes-Free Use from Your Android Phone

To read these pages most efficiently with a screen reader, use heading level navigation.

- At Level 2 are post dates, archives, subscription info, recent tweets, Good Stuff (a collection of pages), and More Information on Android and Accessibility (a compilation of related links).
- At Level 3 are post topics and subtopics.

For a chronological list of posts, check the archive dropdown list, or use the Topic List link under the Good Stuff heading.

To submit a post, contact AccessAna.

Thursday, September 8, 2011

How can I better enjoy my HTC EVO Shift 4G With Sense UI and Gingerbread?

Contributed by Alex Hiironen

The HTC EVO Shift 4G from Sprint is an excellent Android phone, with hardware keyboard, physical navigational controller, and decent specs. One of its drawbacks, however, is the HTC Sense user interface. The Sense UI affects fewer of the phone's applications than the Touchwiz overlay on some Samsung phones, but Sense does require users to find some extra know-how or workarounds for certain things: the accessibility option in settings, the unlock gestures, the stock launcher, the call answer/reject/end gestures, the in-call screen, and the Contacts, Messaging, Alarms, and camera apps. Don’t worry, most of this is still usable.

In this post, I explain how to work around the accessibility glitches in the HTC Sense...
You cannot post messages because only members can post, and you are not currently a member.

Description: Announcements and discussions about the Eyes-Free project whose focus is development of applications that provide eyes-free access to the Android platform.

🌟 Samsung Gravity smart t-mobile
I saw a tweet about this phone earlier. It's been announced but not yet released. The estimated release date is 06/08/2011. This phone has a slide out keyboard and is supposed to be available for under $100 with a contract. I didn't see if it was 4g, but it might be a phone of interest to some of you.... more »
By Gordon - 3:19am - 1 new of 1 message - Report as spam

🌟 The vOICe and Color Identification
I'm using the vOICe to identify colors. Generally speaking, it does a good job though it's better at giving me color approximations than precise colors. For example, it says that my aqua bedspread, sky blue throw pillow and green blanky are all cyan, and it says a canary yellow box is green or yellow green. I remember colors and the exercise of combining red, yellow, and blue in kindergarten well enough to understand that blue, aqua, and green are all on a continuum and that certain yellows (maybe not canary) can kind of sort of look green in certain lighting, so what the vOICe does makes sense to me.... more »
By Ana G - Jun 2 - 2 new of 2 messages - Report as spam

🌟 Seesmic
I have installed seesmic and added my twitter account. I don't see a way to add any more accounts. I wanted to add my facebook account. Is anyone else using seesmic? How do you add more accounts? Thanks for any help.
By Terra Syslo - Jun 2 - 1 new of 1 message - Report as spam

🌟 List of accessible apps?
Is there a list of apps that are known to be accessible or are themselves accessibility apps? I'm trying to put together a list of things I'll need to download when the time comes. Chris
By Christopher Bartlett - Jun 2 - 3 new of 3 messages - Report as spam

🌟 Calculator
Ok I've attempted to use several different calculators, but no luck. Can someone please let me know which one I need and maybe provide a link.
By Christopher Bartlett - Jun 2 - 2 new of 2 messages - Report as spam
Tecla Shield

• Wireless device that controls smartphones and tablets using your external switches or the driver controls of your power wheelchair

• The only switch interface that works with both iOS® and Android™ mobile devices.
Products / New Products

ASL brings innovative products to our clients! We are here to help each client reach their full potential – our team creates products and designs as a direct result of the needs of those we serve. Our goal has always been independence and equal rights for those we work with....
HouseMate ECU for Android Configurator

- Enables a person with no arm movement or hand dexterity to operate everything in their environment wherever they go
- 100% of an Android Tablet/phone independently
- Push a button, blow a puff of air, bite, turn your head, raise an eyebrow or any other slight movement, even chin control joystick
- New Advanced Version includes an HID mouse interface for 100% visual control
- Makes web browsing fully accessible with a simple switch
HouseMate ECU for Android Configurator

Email to a Friend

Sign up for price alert

Availability: In stock

As low as:

$459.90

Price as configured:

$1,974.95

Add to Wishlist

Add to Compare

Quick Overview

Housemate ECU Environmental Control System enables a person with no arm movement or hand dexterity to operate everything in their environment wherever they go plus 100% of an Android Tablet and/or Android phone's functionality completely independently! Simply push a button, blow a puff of air, bite, turn your head, raise an eyebrow or any other slight movement, even chin control joystick! New Advanced Version includes an HID mouse interface for 100% visual control. Makes web browsing fully accessible with a simple switch. Compact and portable use on wheelchair or in bed!
Android and Access
Environmental Controls
http://getvera.com/controllers/veralite/

Your new assistant

Home control doesn't have to be complicated or expensive, so we came up with the VeraLite Smart Controller, which is simple and inexpensive. It may be small, but it's capable of big things!

- Easily manages up to 70 devices
- Plug and play with your Internet connection
- Controls over 750 smart products of all kinds
- Custom text and email alerts for any situation

VeraLite gives you easy control over lights, cameras, thermostats, door locks, alarm systems and more. Plus you easily can add intelligence to almost anything electronic in your home, and VeraLite can control them too. All the smart home benefits you've been looking for are right here in this easy, inexpensive add-on to your home network.

An amazing amount of smart technology that fits in the palm of your hand.

VeraLite gives you easy control over lights, cameras, thermostats, door locks, alarm systems and more.

Only $179.95
Z Wave Modules

Z Wave modules differ from X-10 in that they work over a proprietary wireless network instead of existing wiring. Furthermore, instead of each module having to directly talk with the gateway, modules can communicate with each other.

This means that a command sent to the gateway is sent to all modules within range and each of those modules relay the command to all modules within their range, and so on, until the appropriate module receives the command.

This allows your network of modules to extend far out beyond the reach of the gateway itself making multiroom, multilevel, and exterior/interior implementation all on one network a possibility

Shown at right is a dimmable 3 prong lamp switch.
User Interfaces

Vera gateways can be controlled with a number of different interfaces.

- **First Party Software**
  - PC
  - MAC
  - Smartphone App

- **Third Party Software**
  - Smartphone Apps
  - TASKER! (Android only)
Tasker is a phone automation application that allows you to really unleash your android device’s capabilities.

Tasker in a nutshell is a program that tells your device “When this happens, do this!”

- “When something is plugged into the headphone jack, open my music app”
- “When I open the navigation app, turn GPS on”
- “When my phone is connected to this cell tower, turn on wifi and connect to my home wifi”
Plugins for Tasker allow you to access other features of your phone and interface with other internet connected devices.

- **Autovoice** – Allows you to set up custom voice commands and turn always listening on
- **Autocast** – Enables you to control a Chromecast device on your TV
- **Autovera** – Interfaces with your Vera gateway
TFL Environmental Control Lab
Google Glass

- Wearable Technology
- Bluetooth Connection
- Navigate
- Make a Call
- Send a Message
- Take a Picture or Video
- Get the News
- Search
- Google Play Music
- Google Now
- Be Social
- Internal Compass
- $1500
Our Favorite Android Apps
What is Google Play?

• Google Play, formerly the Android Market, is a digital distribution platform for applications for the Android operating system and an online electronics and digital media store, operated by Google. The service allows users to browse and download applications developed with the Android SDK and published through Google, as well as music, magazines, books, movies, and television programs.

• Applications are available through Google Play either free of charge or at a cost. They can be downloaded directly to an Android or Google TV device through the Play Store mobile app, or by deploying the application to a device from the Google Play website.
MUSIC, MOVIES, BOOKS, APPS AND MORE

on Android and the web.

DISCOVER
Your favorites and more of what you love, now all in one place.

ACCESS
Your stuff is everywhere you are, on the web and on your Android devices.

ENJOY
No more hassles or waiting, just press play: it's all there, ready when you are.

All your entertainment together

All the stuff you love is finally in one place. On Google Play you can choose from over a million apps and games, browse the world's largest eBookstore, discover millions of songs, watch the latest and greatest movies and TV shows, and even flip through your favorite magazines.

Before you decide, sample a song or book for free, view ratings, user reviews, screenshots, or watch a movie trailer. With Google Play, you won't miss a thing.
Dragon for Android

**Dragon Mobile Assistant**
- Speak to send a text, email, or call
- Set reminders
- Search the Internet
- Program to listen only to your voice
- Free

**Swype**
- Alternate Keyboard
- Draw from one letter to the other without lifting a finger
- Reduces finger movement/fatigue
Google Drive

- Upload photos, videos, documents, and other files and access wherever you go
- Share photos and files
- Make files available offline
- Scan documents with device camera
- Up to 15 GB of storage
- Free
Remote Mouse

• Turns your mobile phone or tablet into a wireless remote control for your computer
• Fully simulated mouse
• Magic trackpad
• Multi touch Gestures
• Landscape mode
WalkyTalky

- Accessible navigation aid
- Periodically updates the status bar with your current location to the nearest street address
- Ability to input a destination and directly launch Maps Navigation in Walking directions mode
- Need to enable GPS when running this app
- FREE
Wolfram Alpha Apps

- Wolfram Software
- Multiple Apps
  - Algebra
  - Calculus
  - Fractions
  - Physics
- Varies in Costs
- Solve problems on the spot
- Shows solutions step-by-step
• Largest digital library with over 80 million users.
• Unlimited access to over 100,000 books for just $8.99 / month - with a one month free trial
  – Unlimited reads
• Over 900 publishers, including NYT bestsellers, literary classics, groundbreaking non-fiction, and reader favorites in every genre
• World’s largest digital document collection, with millions of user-uploaded written works
• Make notes and highlight text as you read
• Zoom in on images
Flipboard: Your News Magazine

- Personal magazine
- Pick a few interests and tap any of the tiles to begin flipping
- Add blogs and publications
- Connect Flipboard to up to 12 social networks
General Science

• Contains the multiple choice questions
• Free
• Question about following concepts,
  Biology
  Chemistry
  Elements
  Inventions
  Nuclear Energy
  Physics
  Units & Measurements
ColorNote Notepad
Notes To Do

- Simple notepad app
- Organize notes by color
- Checklist for To do list & Shopping list
- Checklist to get things done
- Organize your schedule in calendar
- Password Lock note
- Free
Go Read

- FREE accessible e-book reader for people with print disabilities
  - Android 2.2 Froyo and above
- Access and download books directly from Bookshare
- Read with voiced navigation and text-to-speech
- Read books in DAISY 3 text and EPUB 2 formats
MessagEase Keyboard

• Keyboard has large letters
• Change the colors
• Type using a Swype gesture
• Change the keyboard layout
• Lookup dictionaries to find the right spelling.
• Change the size, shape, haptic feedback
• FREE
Easy Reminder

- Set alerts to remind you about unread messages or missed calls
- Notification is configurable
  - decide a time slot during which you will not be disturbed
- Free
Voice Note Trial

- Create lists, texts, email, notes, calls, and dial by voice
- Can use Google Voice Recognition when connected to internet
- Free
Talk Text to Voice

• Convert text to voice using the Text-to-speech engine on your smartphone
• Allows importing web pages directly from the browser to listen to them
• Can also import selected text from other apps
The Future of this OS is Limitless

• Google has the futuristic ambition and the funds to take Android to unprecedented heights. In many areas — such as predicting what users will do next.

• Google Now knows that in the morning you’re getting ready for work and will tell you about the traffic.
Introducing Google Now

The right information at just the right time

From knowing the weather before you start your day, to planning the best route to avoid traffic, or even checking your favorite team’s score while they’re playing, Google Now brings you the information you want, when you need it.

Assistance around the clock
Resources

- http://www.android.com/about/
- http://www.google.com/landing/now/#whatisit
- http://www.statista.com/topics/876/android/
- http://getvera.com/controllers/veralite/
- http://www.google.com/glass/start/
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https://www.research.net/s/TFLwebinar
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