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PROGRAM

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Accessibility!

Smartphones, Cell Phones, and Mobile Devices with PDA Features



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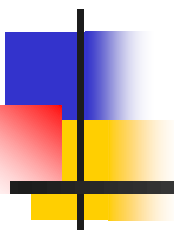
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Objectives

- **Identify accessibility features of Smartphones, Cell Phones, Mobile Devices, and PDAs that meet the needs of 5 different impairments.**
- **List at least 2 accessibility features that will assist a person with a brain injury.**
- **Identify at least one built-in accessibility feature on a mobile device.**

Dedicated PDA, Smartphone with PDA features, Mobile devices with PDA features.



PDA (Personal Digital Device) is a mobile device that functions as a personal information manager with application software that functions as a personal organizer. Features might include -- an alarm, calendar, address book, notepad, and word processing. Some devices provide access to internet, and e-mail.

- » **Demonstration of a dedicated PDA**
- » **Demonstration of a Smartphone with PDA features**
- » **Demonstration of mobile devices with PDA features**



Mobile Operating System

Definition of Mobile OS

- **A set of programs that manages hardware resources, and provides common services for application software.**
- **The operating system is the most important type of system software.**
- **Without an operating system, a user cannot run an application program**
- **The Mobile OS is somewhat simpler than those used on computers.**
- **A Mobile OS deals more with the wireless versions of broadband and local connectivity, mobile multimedia formats, and different input methods.**



Mobile Operating Systems

Common Mobile Operating Systems

- **Android**
- **Apple iOS**
- **Blackberry OS (“Research in Motion”)**
- **Symbian**
- **Windows Mobile Operating System**

5 areas of impairment that might warrant the use of PDA



- **Cognitive**
- **Hearing**
- **Physical**
- **Speech**
- **Vision**



Cognitive Impairment

Accessibility Features

- **Has a range of audio & visual alerts to choose from to notify the user of appointments, tasks, and things-to-do etc..**
- **The ability to associate photos with telephone numbers in the telephone's memory**
- **Ensuring menus and instructions are clear and simple to understand**
- **Provides simple instructions when something is required from the user**
- **Provides enough time for people to enter the required information**



Hearing Impairment

Accessibility Features

- **A range of visual alerts to notify the user of incoming calls, and messages**
- **Text based messaging options**
- **Adjustable volume control**
- **Display of missed, received or dialed calls through call logs**
- **Visual or tactile indicators showing what has been pressed on the keypad, and visual display of text**



Speech Impairment

Accessibility Features

Text-based features of phones to help communicate.

- **Text Messaging / SMS (Small Messaging Service)**
- **Email**
- **Instant Messaging**
- **Multi-media Messaging**
- **Predictive Text**



Physical Impairment

Accessibility Features

- **Ability to use the phone in 'handsfree' mode**
- **Voice recognition for dialing or accessing features within the phone**
- **Predictive text input that predicts the word and minimizes the number of key presses**
- **Any key answering which allows the call to be answered by pressing any key**
- **Controls of the phone do not require pinching, twisting or rotation of the wrist**



Vision Impairment

Accessibility Features

- **The size of the main display**
- **Backlit display**
- **Adjustable font sizes**
- **Adjustable brightness, and contrast controls for the display**
- **Tactile markers to help orient your fingers on the keypad**
- **Audible or tactile feedback to confirm a button has been pressed**
- **Audible cues for low battery, caller waiting or ending a call and volume level**



Resources

Decoding Mobile Technologies: Review of accessibility features of Android, iOS, and other mobile operating systems.

www.resnaprojects.org/statewide/webed/gmu02.html

PowerPoint Presentation - Decoding Mobile Technologies: Review of accessibility features of Android, iOS, and other mobile operating systems.

www.resnaprojects.org/statewide/webed/gmu02mobiletech.ppt

Mobile Operating System, Wikipedia

http://en.wikipedia.org/wiki/Mobile_operating_system



Resources Cont...

Making Cognitive Connections Project “ID 4 the Web” the "ID" stands for Instructional Design. Projects revolve around books and online video trainings that teach those with cognitive challenges how to use smartphones, iPads, and other devices as memory and cognitive prosthetic devices.

www.id4theweb.com

Mobile accessibility, The Global Accessibility Reporting Initiative (GARI)

www.mobileaccessibility.info

PDA Intervention Plan: Implementing Electronic Memory and Organization Aids document

<http://www.brainline.org/downloads/PDFs/PDAInterventionPlan.pdf>

Accessibility Checklist for people with cognitive disabilities, Institute on Disabilities at Temple University

www.disabilities.temple.edu/programs/assistive/atrccd