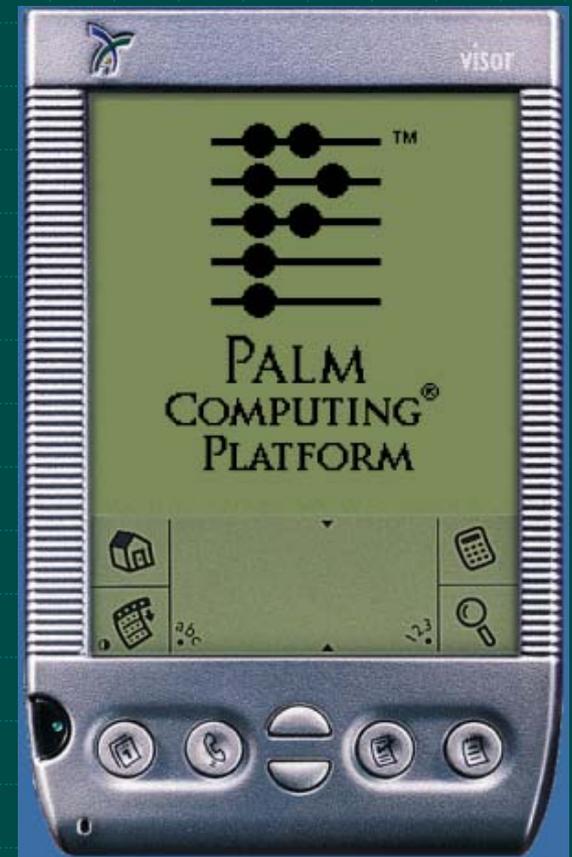


PDAs from A to Z: Personal Digital Assistants in the Medical Library

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Objectives

- Identify PDA hardware and software components
- Identify principal types of health sciences applications available for PDAs
- Discuss library-specific applications for PDAs

Overview

- PDAs defined: hardware and accessories, resources
- PDA software applications: operating system software, basic applications, general functionality applications
- Health care applications: types of resources, examples
- Library applications: what you can do



Personal Digital Assistants

Definition, Hardware, Accessories



Definition

- Hand-held computers
 - Ancestors include the Apple Newton and the Psion 1, both from the 1980's
 - Palm Pilot was introduced in 1996
 - Intended to complement, not necessarily replace a PC
 - What will the future bring?

Hardware—Microprocessors

- PDAs currently run 20-400 MHz
 - Current PCs run around 2 GHz
 - Adequate for most PDA applications
- Motorola Dragonball (Palm OS)
- Intel StrongARM or Xscale (Pocket PC)

Hardware—ROM and RAM

- ROM (Read Only Memory)
 - Standard programs such as the date book, address book, memo pad, and calculator
- RAM (Random Access Memory)
 - Data added to PDA by user and any additional applications loaded by user
- 16MB is current standard, can upgrade/add
 - More RAM necessary as you add third-party applications

Hardware—Display and Data Entry

- Display options
 - Color
 - Monochrome
 - Color is essentially standard
- Data entry options
 - “Hot” buttons
 - Stylus and touch screen (Graffiti)
 - Add-on keyboards
 - Voice recognition

Hardware—Input/Output

- Data synchronization devices
 - Communicate with a PC
 - Serial port, USB port, cradle, infrared port
- Infrared port
 - Beam information to another PDA or PC
- Modems, wireless modems, LAN cards
 - Connect to a network/the Internet

Hardware—Batteries

- Alkaline (AAA) or rechargeable
- Lifespan depends on several factors
 - Color LCD display vs. grayscale
 - Memory usage
 - Specific features like voice recording and MP3 players
- RAM memory requires battery power at all times, however small

Accessories

- Many available, more being developed
 - Memory expansion
 - Digital cameras
 - Cell phone add-on/combos
 - Modems, wireless modems, LAN cards
 - Audio/visual players
 - And much, much more!

Hardware and Accessory Sites

- ZDNet

www.zdnet.com

Under "Go Mobile" heading, click on "Handhelds"

- PCWorld

www.pcworld.com

Under "Buying Guides," select "PDAs"

- PDA Street

<http://www.pdastreet.com/>

- PDA Buyers Guide

<http://www.pdabuyersguide.com/>

- Literally **thousands** more



PDA Software

Operating Systems,
Standard Applications,
Added Applications



Software—Operating Systems

- Palm OS (<http://www.palmos.com/>)
 - Majority market share
 - Large number of applications
 - Smaller hardware/memory requirements
- Long-term prospects
 - Questions about Palm's finances
 - Microsoft aggression in PDA market
 - Linux-based software may threaten

Software—Operating Systems

- PocketPC (<http://www.microsoft.com>)
- Formerly known as Windows CE
 - Growing popularity
 - Allows user to seamlessly (ahem!) use Office applications on PDA
 - Uses more memory, processing speed
 - Generally Pocket PCs are more expensive

Software—Synchronization

- Software comes with PDA purchase
- Necessary to sync data to or from PDA to PC or laptop
 - allows user to create data on PC and sync to PDA and vice versa
- Use to install additional PDA software

Software—Standard Applications

- Date book
- Memo pad
- Address book
- To do list
- Calculator

Software—Added Applications

- Internet access/e-mail access
- Multimedia applications
 - MP3 players
 - Video/image viewers
- Office applications including word processing, spreadsheets, databases, Adobe PDF viewer
- Prepare to pay for the best software

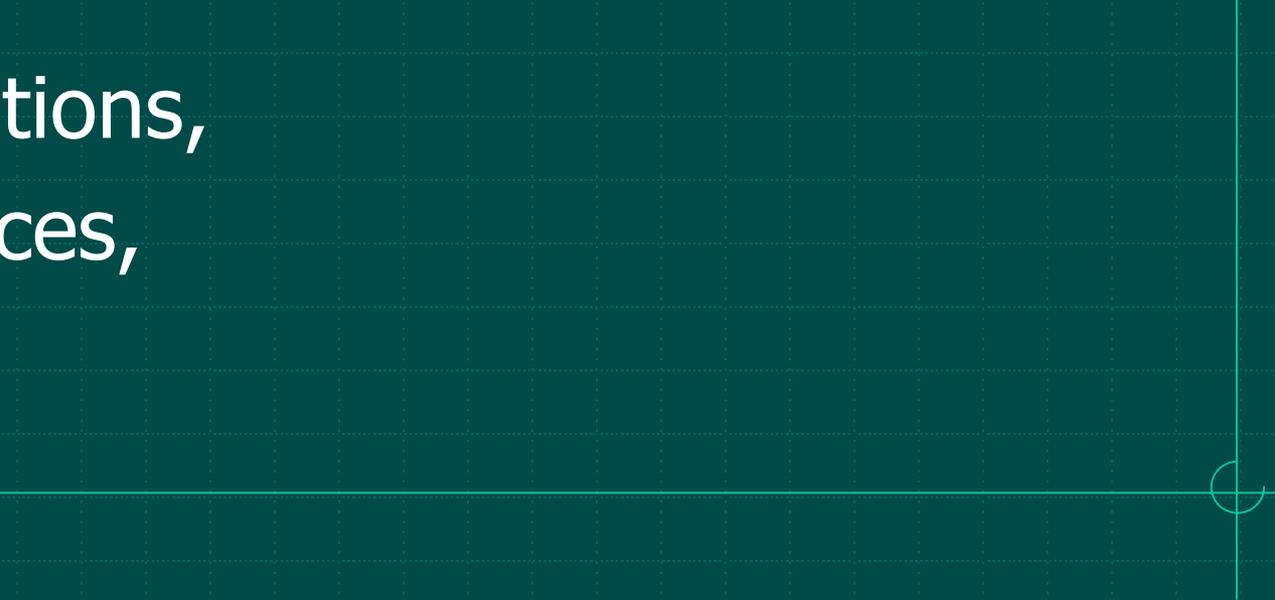
Software Sites

- Handango
<http://www.handango.com/>
- Downloads.com Mobile Area
<http://download.com.com/2001-2005-0.html>
- Tucows PDA
<http://www.pdacentral.com/>
- PalmGear
<http://www.palmgear.com/>
- PocketGear
<http://www.pocketgear.com/>



PDA's and Health Care

Applications,
Resources,
Sites



Health Care Applications

- Basic applications work for health care
- Drug guides
- Medical calculators
- Clinical practice guidelines
- Coding, billing, and patient tracking
- Databases
- Reference tools

HC Applications—Drug Guides

- Drug information at fingertips
- Dosing, interactions, warnings, cost
- ePocrates Rx

<http://www.epocrates.com/products/epocratesRx4/>

- Others
 - Physician's Desk Reference
 - Mobile MicroMedex
 - More

HC Applications—Calculators

- Available for almost any specialty
- Formulae and calculator combined
- MedMath
<http://www.stanford.edu/~pmcheng/medmath/index.html>
- Others
 - MedCalc
 - Archimedes
 - More

HC Applications—Guidelines

- Broad and specialized available
- Some are keyword searchable
- InfoPOEMS/InfoRetriever

<http://www.medicalinforetriever.com/index.cfm>

- Others
 - MedRules
 - InfoGuide Center
 - More

HC Apps—Coding/Billing/DBs

- Access to patient info at all times
 - Handheldmed's Patient Tracker
<http://www.handheldmed.com/>
- Improve ICD-9 coding and billing
 - ICD-Notes
<http://www.med-notes.com/icd-notes.htm>
- Databases
 - HanDBase
http://www.ddhsoftware.com/handbase_plus.html
- Security issues

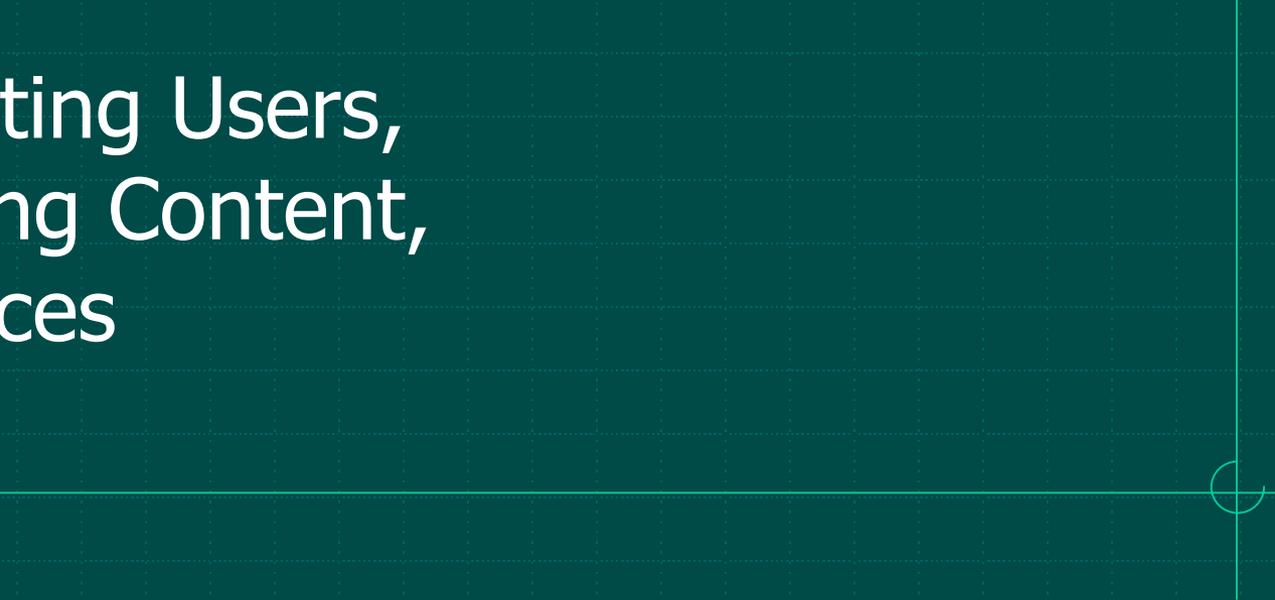
Sites

- Handheldmed
<http://www.handheldmed.com/>
- Collectivemed
<http://www.collectivemed.com/pdasource.shtml>
- Healthy Palm Pilot
<http://www.healthypalmpilot.com/>
- pdaMD
<http://www.pdaMD.com>
- Ectopic Brain
<http://pbrain.hypermart.net/index.html>



PDA's in the Library

Supporting Users,
Providing Content,
Resources



Supporting Users—Syncing

- Provide syncing stations/capabilities
 - Cradles/IR stations
 - Network syncing
- Most visible way to support users
- Mostly a hardware/configuration issue
 - IT may say it will not work, but it can
 - Georgetown University
<http://www.georgetown.edu/dml/pda/documentation.htm>

Providing Content—Licensed

- Needs assessment
 - Form a PDA Club or working group
 - What do users want/need?
 - ORGANIZATION and EVALUATION
- Site licenses for PDA resources
 - Just like database licensing!
- Add PDA-format ebooks to collection
 - Include in catalog so users can locate

Providing Content—Library

- Library catalog
 - Try the catalog on a PDA
 - Reformat if necessary
 - Work with ILS vendor if necessary
- Web pages
 - Reformat library web content for PDA
 - ◆ If it meets Section 508 accessibility guidelines, it should work on a PDA
 - Create new content with mobile user in mind

Content Resources

- Elsevier, Wiley, Ovid, others
- Avantgo
 - <http://www.avantgo.com>
 - Easily turn library web content into a PDA channel
- PubMed for the PDA:
 - <http://certif.nlm.nih.gov:8080/PDAsearch/pubmed.html>
 - Basic PubMed searching
 - Save as an Avantgo channel for searching without wireless access
- Journal to Go
 - <http://www.journaltogo.com/>

Librarian Resources—Just a Few

- HandHeld Librarian
 - <http://www.handheldlib.blogspot.com>
 - Regularly updated web log for medical librarians
- Arizona Health Sciences Library Bibliography
 - <http://educ.ahsl.arizona.edu/pda/art.htm>
 - Citations directly from the health literature
 - Much, much more on the AHSL site
- MLA-PDA electronic discussion list
 - <http://www.mlanet.org/education/telecon/pda/pdadiscuss.html>
 - Generally low traffic, but interesting

Wrap Up / Evaluation

- Palm OS Emulator and Simulator
<http://www.palmos.com/dev/tools/>
- MCR PDA Working Group
 - “Meet” monthly to discuss PDAs in MCR
 - Email me to participate
- Questions?
- Evaluation

Special Thanks

- Greg Bodin, MLIS, AHIP
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 - SouthCentral Region

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