

Mobile Computing Short Subjects: What's New and Updated Tips and Tricks

Session 8012 - Thursday, August 5, 2010: 12:15 PM-1:30 PM Room 107 (Hynes Convention Center)



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The content in is presentation is targeted for the home hobbyist. The presentation does NOT represent the opinion or recommendations of IBM.

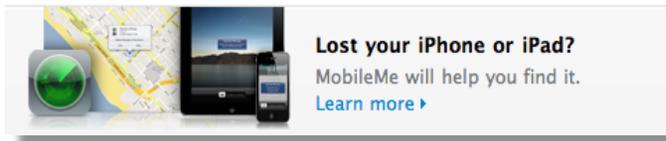
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Some Wireless Security Tips for Mobile Devices

- Because you never know when your laptop or device will be lost or stolen:
 - Take full advantage of any hardware or software encryption that is available for your laptop or device.
 - If your hardware does not have hardware encryption, there are software offerings that will encrypt your hard drive.
 - If your laptop has power-on password and or hardware locking capability use it.
- Look for devices that have remote wipe capability. Or devices like the iPhone that will erase all personal information after 10 unsuccessful attempt to log in.



- Locate it on a map
- Display a message or play a sound to help you find it
- Set a pass code to lock remotely
- Initiate a remote wipe of all data and set the device back to it default factory setting

The screenshot shows the MobileMe Account Settings page for 'Geoff Smith (gksmithmac)'. The page is titled 'Find My iPhone and Remote Wipe'. On the left, there is a sidebar with navigation options: Summary, Personal Info, Account Options, Billing Info, Password Settings, Storage Settings, Personal Domain, Security Certificates, and Find My iPhone. The main content area shows a map of Seattle, WA, with a blue circle indicating the location of 'Geoffrey Smith's iPhone 3GS', which is 'Online'. Below the map, there are several options: 'Display a Message or Play a Sound', 'Remote Passcode Lock', and 'Remote Wipe'. A blue callout box with white text says: 'Important Message: Please help return my lost iPad. If found, call 408-555-0198.'

- If you use Bluetooth:
 - Always use a nontrivial key for pairing
 - Turn discovery off once you've paired the device

Need an office suite and you don't want to spend a lot of money?

You have a couple of choices.

Open Office which includes:

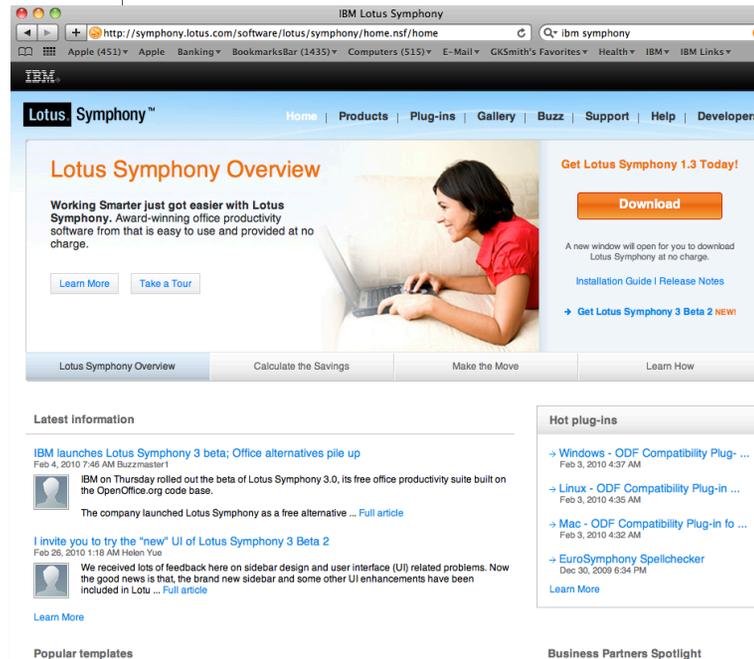
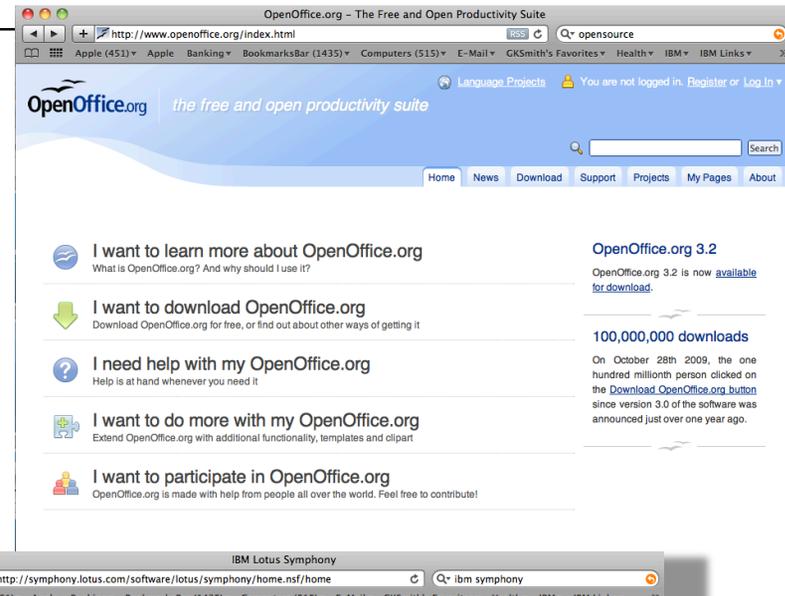
- A Word Processor
- Presentation software
- Spreadsheet
- Drawing
- Database

IBM offers:

IBM's Lotus Symphony

Both office suites are offered on multiple platforms:

Windows
Mac OS
Linux



On the road and you need an application fast? Check out what's available in open source applications

Web Browsing



Mozilla Firefox

The premier free, open-source browser. Tabs, pop-up blocking, themes, and extensions. Considered by many to be the world's best browser.

[Download Page](#)

Video Player, BitTorrent, Podcasting



Miro

Beautiful interface. Plays any video type (much more than windows media player). Subscribe to video RSS, download, and watch all in one. Torrent support. Search and download from YouTube and others.

[Download Page](#)

IM - Instant Messaging



Pidgin

Connect to multiple IM accounts simultaneously in a single app, including: AOL IM, MSN, and Jabber.

[Download Page](#)

Download helpers



SkipScreen

A Firefox extension that skips unnecessary clicks and wait times on Rapidshare, Megaupload, Mediafire, zShare, and more.

[Download Page](#)

E-mail



Mozilla Thunderbird

Powerful spam filtering, solid interface, and all the features you need.

[Download Page](#)

RSS



RSSOwl

Solid cross-platform RSS client.

[Download Page](#)

Peer-to-Peer Filesharing



Cabos

A simple, easy to use filesharing program. Gnutella network.

[Download Page](#)



Gnucleus

A very good Gnutella search and download filesharing program.

[Download Page](#)

Video Playback



Miro

Beautiful interface. Plays any video type (much more than windows media player). Subscribe to video RSS, download, and watch all in one. Torrent support. Search and download from YouTube and others.

[Download Page](#)



VLC

Plays more video files than most players: Quicktime, AVI, DIVX, OGG, and more. Pretty good interface.

[Download Page](#)



MPlayer

Similar to VLC-- plays loads of video formats.

[Download Page](#)



Media Player Classic

Compact, but powerful media player. Plays anything under the sun. No install necessary.

[Download Page](#)

More open source...

You'll be surprised at how many quality applications are available

Most are now available on MAC and Unix well as the ever popular Windows OS. To learn more just Google "open source" or see sites such as

<http://www.opensourcewindows.org/>

FTP / SFTP



Filezilla
Excellent FTP program.
[Download Page](#)

IRC



X-Chat 2
IRC client.
[Download Page](#)

Archiving



PeaZip
Fantastic archiving utility to extract and pack archives of an extensive amount of formats. PeaZip also features password protecting archives, keyfile support, system integration, a lovely interface, and much more.
[Download Page](#)

Word Processing / Office Suites



OpenOffice.org
Big, full featured suite of tools for word processing and spreadsheets. Compatible with and a free replacement for Microsoft Word documents. Also supports OpenDocument Format.
[Download Page](#)



AbiWord
A word processor. Leaner and quicker than OpenOffice. Compatible with Microsoft Word documents and OpenDocument Format.
[Download Page](#)

Podcasting



Juice
Solid podcasting client.
[Download Page](#)

DVD Ripping



Handbrake
DVD to MPEG-4 ripper/convertor.
[Download Page](#)

Sound Recording



Audacity
Simple sound recording tool.
[Download Page](#)

Graphics / Photo Editing



GIMP
Photo editing application that rivals Photoshop in features.
[Download Page](#)



Paint.NET
Graphics editor with a very nice interface.
[Download Page](#)



Inkscape
Vector graphics application.
[Download Page](#)

Speaking of free, anybody have an old laptop they want to bring back to life?



is a great choice.

Revitalize that old laptop for the kids.

They get to learn UNIX too

- It has a very friendly and sophisticated interface. The latest version rivals MAC OSX and Windows 7 in neat visual effects
- It's free and easy to install.
- You can try it out just by running it from the DVD no installation necessary
- It has modest memory and hard drive requirements
- Should you decide you like it, it will cohabitate nicely with your exiting windows installation
- A special "netbook edition" is also available

A screenshot of the Ubuntu 9.10 website. The page features the Ubuntu logo at the top left and a navigation menu with links for Ubuntu, Server, Cloud, Support, Community, Partners, and News. The main headline reads "Ubuntu 9.10 is here" and "Free operating system for your desktop or laptop". Below this, there are three bullet points highlighting features: "Faster, smoother, more beautiful...", "Developing at speed...", and "...and introducing your personal cloud". Two orange buttons, "Download Ubuntu" and "Take the tour", are positioned below the text. To the right, there is a screenshot of the Ubuntu desktop environment. Further down, the page is divided into two columns. The left column is titled "For your netbook. Ubuntu 9.10 Netbook Remix" and lists features like a newer interface, ease of installation, and small screen optimization. The right column is titled "For your server. Ubuntu 9.10 Server Edition" and lists features like EC2-based private cloud and open source cloud. At the bottom, there are two sections: "What is Ubuntu?" which describes the operating system and its developers, and "The Ubuntu promise" which lists commitments to being free, providing support, and being open source. A "Discover Ubuntu" link is at the bottom left, and "Embrace the Ubuntu Philosophy" is at the bottom right.

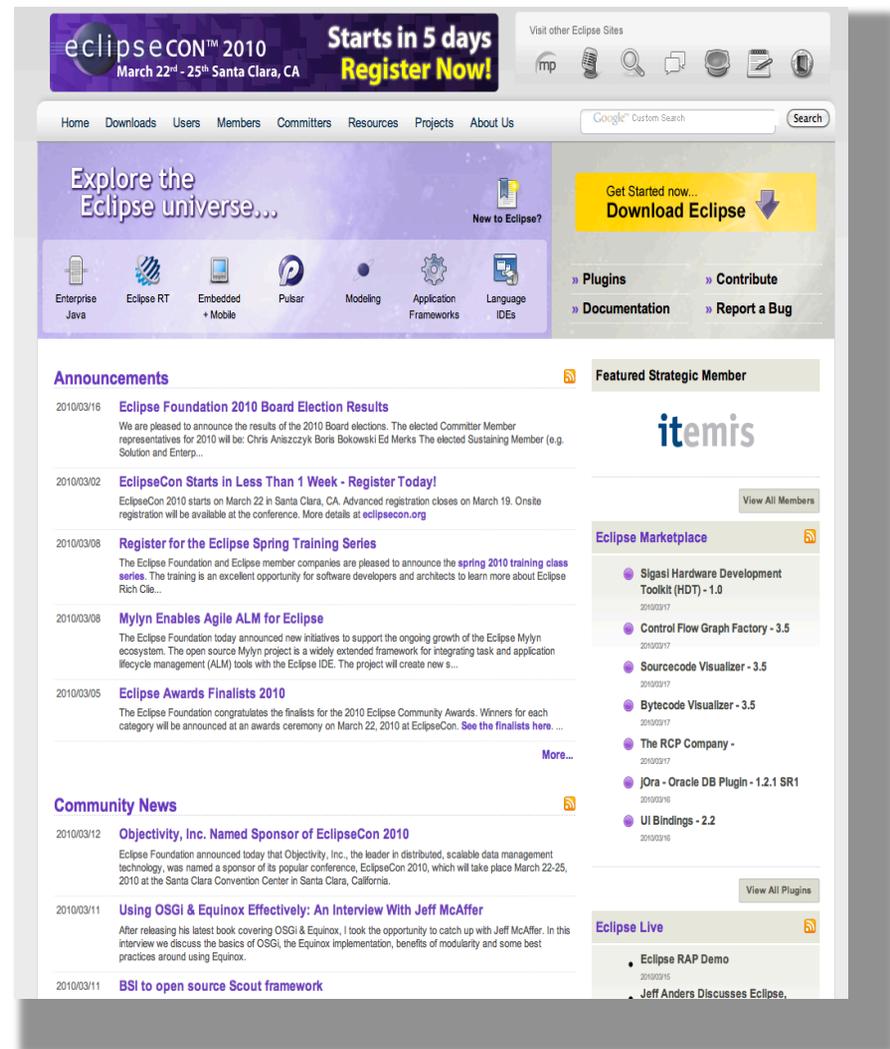
Want to do a little programming hobbyist programming, but you down want to pay big bucks for an IDE?

Check out Eclipse.

Eclipse is an open source community whose projects are focused on building an extensible development platform, runtimes and application frameworks for building, deploying and managing software across the entire software lifecycle.

Eclipse open source community has over 60 open source projects. These projects can be conceptually organized into seven different "pillars" or categories:

- 1 Enterprise Development
- 2 Embedded and Device Development
- 3 Rich Client Platform
- 4 Rich Internet Applications
- 5 Application Framework
- 6 sApplication Lifecycle Management (ALM) Service
- 7 Oriented Architecture (SOA)



Are you a programmer with some spare time on your hands?

- Consider developing an App!
- It could help pay the kid's tuition.
- It might help you retire early.

A screenshot showing two web browser windows. The top window is the Apple Developer page for 'Start Developing iPad Apps', featuring a navigation bar with 'Technologies', 'Resources', 'Programs', 'Support', and 'Member Center'. The main content includes a heading 'Start Developing iPad Apps' and a sub-heading 'Create innovative applications for iPad with iOS SDK 4 and a range of technical resources and information.' Below this is a section for 'iOS SDK 4' with a small icon and text describing the SDK's components. The bottom window is the Android Developers page for 'Download the Android SDK', with a navigation bar including 'Home', 'SDK', 'Dev Guide', 'Reference', 'Resources', 'Videos', and 'Blog'. The main content includes a heading 'Download the Android SDK' and a table of download links for different platforms.

Start Developing iPad Apps
Create innovative applications for iPad with iOS SDK 4 and a range of technical resources and information.

iOS SDK 4
iOS SDK 4 includes a complete set of development tools for creating applications for iPad, iPhone, and iPod touch, including the Xcode IDE, iPhone Simulator, Instruments, Interface Builder, and more.
Download the iOS SDK from the iPhone Dev Center >

Android developers
search developer docs Search

Home **SDK** Dev Guide Reference Resources Videos Blog

Android SDK Starter Package
Download
Installing the SDK

Downloadable SDK Components
Adding SDK Components
Android 2.2 Platform ^{new!}
Android 2.1 Platform
Android 1.6 Platform
Android 1.5 Platform
Older Platforms
SDK Tools, r6
USB Driver for Windows, r3

ADT Plugin for Eclipse
ADT 0.9.7

Native Development Tools
Android NDK, r4b ^{new!}

More Information
SDK System Requirements
SDK Archives

Download the Android SDK

Welcome Developers! If you are new to the Android SDK, please read the [Quick Start](#), below, for an overview of how to install and set up the SDK.

If you are already using the Android SDK and would like to update to the latest tools or platforms, please use the *Android SDK and AVD Manager* to get the components, rather than downloading a new SDK package.

| Platform | Package | Size | MD5 Checksum |
|------------------|---|----------------|----------------------------------|
| Windows | android-sdk_r06-windows.zip | 23293160 bytes | 7c7fcec3c6b5c7c3df6ae654b27effb5 |
| Mac OS X (intel) | android-sdk_r06-mac_86.zip | 19108077 bytes | c92abf66a82c7a3f2b8493ebe025dd22 |
| Linux (i386) | android-sdk_r06-linux_86.tar.gz | 16971139 bytes | 848371e4bf068dbb582b709f4e66d903 |

[Doodle Jump iPhone game hits the 3 million downloads mark : Tech ...](#)

Mar 9, 2010 ... [doodle jump.jpg](#) The App Store is awash with so many downloads these ... of \$2.9 million dollars in **revenue** since it launched in March 2009. ...
www.techdigest.tv/2010/03/doodle_jump_iph.html - [Cached](#)

Some cool things about the Mac

- It could be just my experience, but my Mac doesn't suffer gradual performance slowdowns as other my other OS did -- forcing me to rebuilt it every 6 months or so.
- When I bought my second Mac, it was very easy to migrate all my data and applications to the new machine. I just ran the migration assistant, connected my new computer to my old computer using a fire wire cable, then powered on my old Mac while holding down the "T" key (for transfer). In an hour, everything was there. No reinstalling apps.
- Macs have a built in back up application called "time machine" which runs automatically and lets you recover important files and applications, simply by going back in time.
- Mobile me lets Mac users sync things like address books, calendars, contacts across their machines, bookmarks, mail and it gives me access to my personal information photos documents, whatever from any web browser
- The light-up keyboard is great for working at night or low light conditions

- The track pad and gestures make navigation easier and offer more flexibility.
- The light-up keyboard is great for working at night or low light conditions
- When things hang, it's easier to shutdown the thread and move on.
- Although there is no blue screen of death. Macs do have a grey veil of death, but it seems to happen less often...could be my imagination.
- I especially like the virtual machine software that lets me run multiple operating systems.
- It runs Windows just great!



Cool features in Windows 7

A sample of the new, improved, or downright cool

- .Windows Touch to turn your fingers into a mouse.
- Play To for streaming music or video around the house.
- Remote Media Streaming to access your home media library via the Internet.
- HomeGroup for headache-free sharing on a home network.
- Windows Search to instantly find virtually anything.

The screenshot shows the Windows 7 website with a navigation bar at the top containing links for Home, Discover Windows, Products, Shop, Downloads, and Help & How-to. Below the navigation bar is the heading "Windows 7 features" with sub-links for "Browse A to Z" and "Browse categories". The main content area features the slogan "Engineered by us. Inspired by you." and a sub-heading "Windows 7 simplifies everyday tasks". Six feature tiles are displayed in a 2x3 grid, each with a small image and a brief description:

- HomeGroup**: Takes the headache out of sharing files and printers on a home network.
- Jump Lists**: Speedy access to your favorite pictures, songs, websites, and documents.
- Snap**: A quick (and fun!) new way to resize and compare windows on your desktop.
- Windows Live Essentials**: 7 great programs, 1 free download. Mail, Movie Maker, Photo Gallery, and more.
- Windows Search**: Find virtually anything on your PC, instantly.
- Windows Taskbar**: Better thumbnail previews, easier-to-see icons, and more ways to customize.

Redundancy isn't just for mainframes anymore.

Be prepared. Here are some options:



- 1 **Boot Managers** let you install more than one OS on your laptop hard drive. If one system image fails, gets corrupted or worse still infected, you usually can boot the other. Often you can use one image to fix or disinfect the broken one.
- 2 **Virtualization software** to install multiple operating systems on one machine. Developers have used this many years to help test their code in multiple environments. If you use a MAC, running virtualization software lets you run nearly every OS that runs on the Intel platform
- 3 **Carry a spare** on a flash or SD Card. Many operating systems can be installed on removable media such as a memory stick an SD card or even a CD. Again this can be useful to repair or disinfect your laptop if it becomes corrupted or infected.



Taxonomy of mobile devices

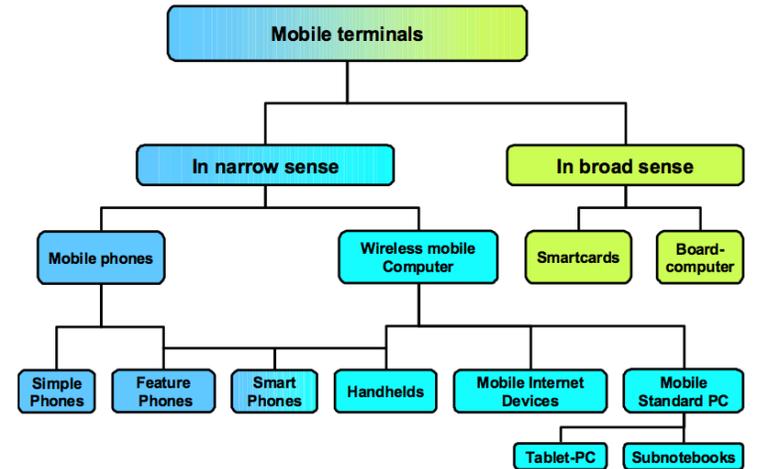
The evolution of mobile computing is ongoing. As technology changes new permutations are appearing every day

Examples: Laptops, palmtops, mobile phones, Smart phones, PDAs tablets, hardened laptops, Netbooks, Smartbooks embedded computers

Wearable examples: calculator watch, virtual retinal display, head mounted heads-up display

To learn more:

- Wikipedia has an excellent summary and history of portable computing
- See also Springer Journal on <http://www.springerlink.com/content/106503/>



Mobile map interactions during a rendezvous: exploring the implications of automation David Dearman, Kori M. Inkpen and Khai N. TruongPDF (457.2 KB)HTML 1-13

Dynamic 2D-barcodes for multi-device Web session migration including mobile phones Alexandre AlapetitePDF (337.3 KB)HTML 45-52

Information privacy in institutional and end-user tracking and recording technologies David H. Nguyen and Gillian R. HayesPDF (358.3 KB)HTML 53-72

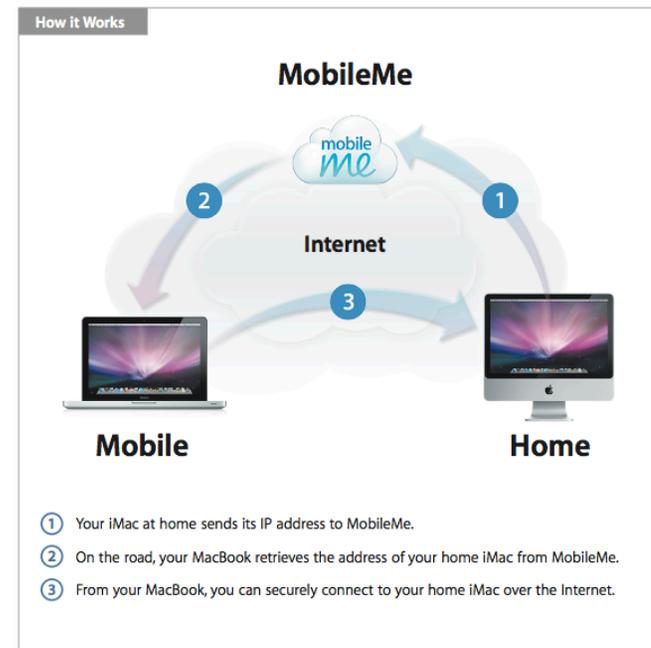
Evaluation of a wearable computer system for telemonitoring in a critical environment Peter Weller, Leila Rakhmetova, Qi Ma and Gerlinde ManderslootPDF (282.2 KB)HTML

- Diagram from Proceedings of the International Conference on E-Business (ICE-B 08) INSTICC Press, July 2008, Porto, Portugal, URL: www.ice-b.org - TAXONOMY FOR MOBILE TERMINALS - A Selective Classification Scheme authors Gunther Schiefer and Michael Decker

Computing from a distance

Using technologies like Remote desktop and Back to my Mac have a number of advantages:

- It lets you keep your system physically secure
- Provides access to high-speed company networks which can be helpful if when your job requires moving large files around.
- Last but not least, it gives you access to another processor without impacting your laptop. Virtual machines are great, but they still a good deal consume CPU and memory
- Lets multiple people share a workstation that may have specialized applications or hardware
- There are many Smartphone apps that make it easy to connect to the desktop or laptop back at the office as if you were sitting in front of it.



Cool Tools: Hiren's Boot CD

- Free utility to windows users that:
- Lets user reset passwords
- Boot with a windows XP desktop to enable troubleshooting
- And more...
- <http://www.hiren.info/pages/bootcd>

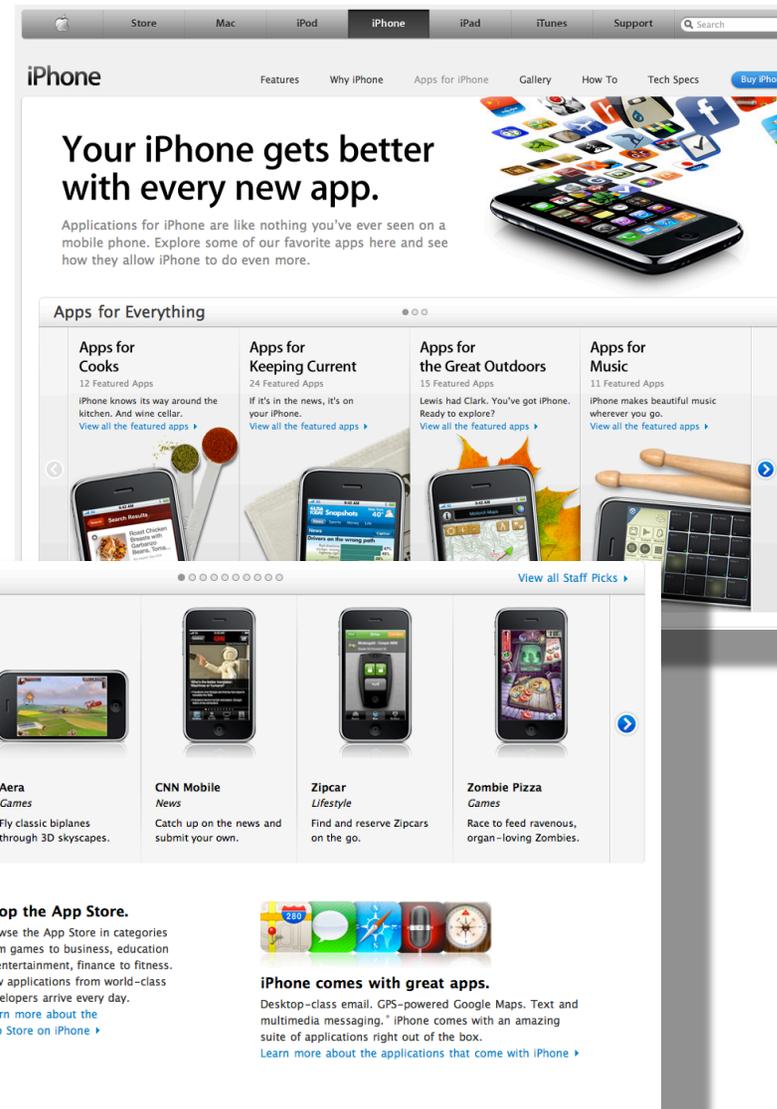
The screenshot shows the website for Hiren's BootCD 10.2. The header features the site name 'Hiren & Pankaj's Home' and navigation tabs for Home, Downloads, Wallpapers, FunStuff, Indian Stuff, and Other. The main content area is titled 'Hiren's BootCD 10.2' and 'All in One Bootable CD which has all these utilities'. On the left, there is a 'Recommended Download' section with a link to 'Repair PC Errors' and a 'Free Download' link. The main list of tools is organized into two categories: 'Antivirus Tools' and 'Backup Tools'. Each tool entry includes the tool name, version, and a brief description.

| Antivirus Tools | |
|---|----------|
| Dr.Web CureIt! Antivirus (2302) | Freeware |
| a free standalone anti-virus and anti-spyware on-demand scanner | |
| Spybot - Search & Destroy 1.6.2 (2302) | Freeware |
| Application to scan for spyware, adware, hijackers and other malicious software. | |
| SuperAntispyware 4.34 (2302) | Freeware |
| Remove Malware, Rootkits, Spyware, Adware, Worms, Parasites (a must have tool) | |
| Malwarebytes' Anti-Malware 1.44 (2302) | Freeware |
| anti-malware application that can thoroughly remove even the most advanced malware. | |
| SpywareBlaster 4.2 (2302) | Freeware |
| Prevent the installation of spyware and other potentially unwanted software. | |
| SmitFraudFix 2.424 | Freeware |
| This removes Some of the popular Desktop Hijack malware | |
| ComboFix (2302) | Freeware |
| Designed to cleanup malware infections and restore settings modified by malware | |
| CWSredder 2.19 | Freeware |
| Popular CoolWebSearch Trojan Remover tool | |
| RootkitRevealer 1.7.1 | Freeware |
| Rootkit Revealer is an advanced patent-pending root kit detection utility. | |
| Backup Tools | |
| DriveImageXML 2.13 | Freeware |
| backup any drive/partition to an image file, even if the drive is currently in use | |
| GImageX 2.0.17 | Freeware |

Some Popular iPhone Apps

Web apps that run in a browser

Apps that run native on the iPhone

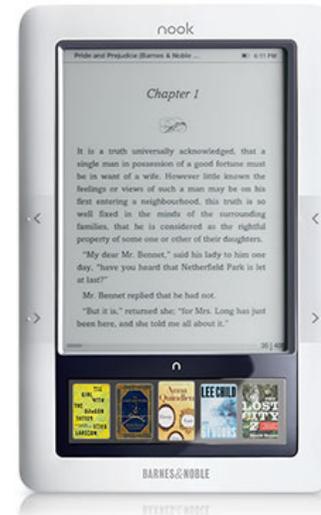


No Bookshelf Boundaries

- The publishing industry has changed...
 - Kindle DX, Kindle Wi-Fi, Kindle 3G
 - Nook Wi-Fi, Nook 3G
 - Sony Reader G3
 - iPad Wi-Fi, 3G

Take your library with you wherever you go...

Have a favorite book in PDF format, just email it to your Kindle address or copy it to an SD card and pop it into your SONY Reader or Nook



[Kindle for PC](#)
Available now



[Kindle for Mac](#)
Available now



[Kindle for iPhone](#)
Available now



[Kindle for BlackBerry](#)
Available now



[Kindle for iPad](#)
Available now



[Kindle for Android](#)
Available now

iPad Fun

Cool Stuff ...

Touch screen, take any place, lightweight nearly always connected, runs a long long time on one charge, almost a replacement for my laptop, plays movies great, looks cool, has tons of cool apps, geographically aware, great for e-mail, reading books, reading newspapers, listening to streaming music, MP3s, audio books, viewing my photos, learning new things, talking to other people, Bluetooth keyboard capable.

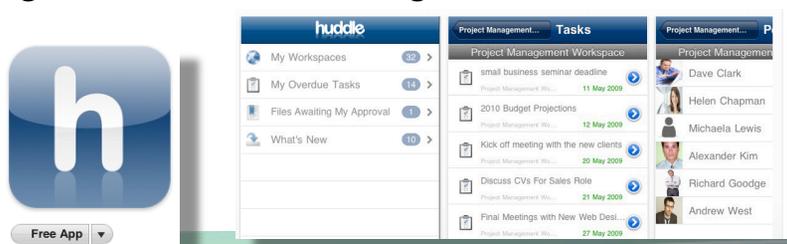
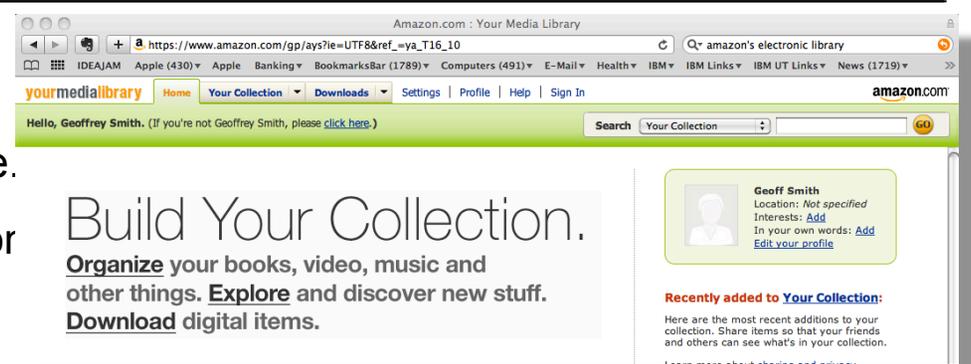


My wish list ...

Multitasking, a built in camera (like all other Apple products save the iPod), USB port for all sorts of things...easier transfer of files, printing the stuff you create with iWorks, and an SD of any size slot for easy expansion.

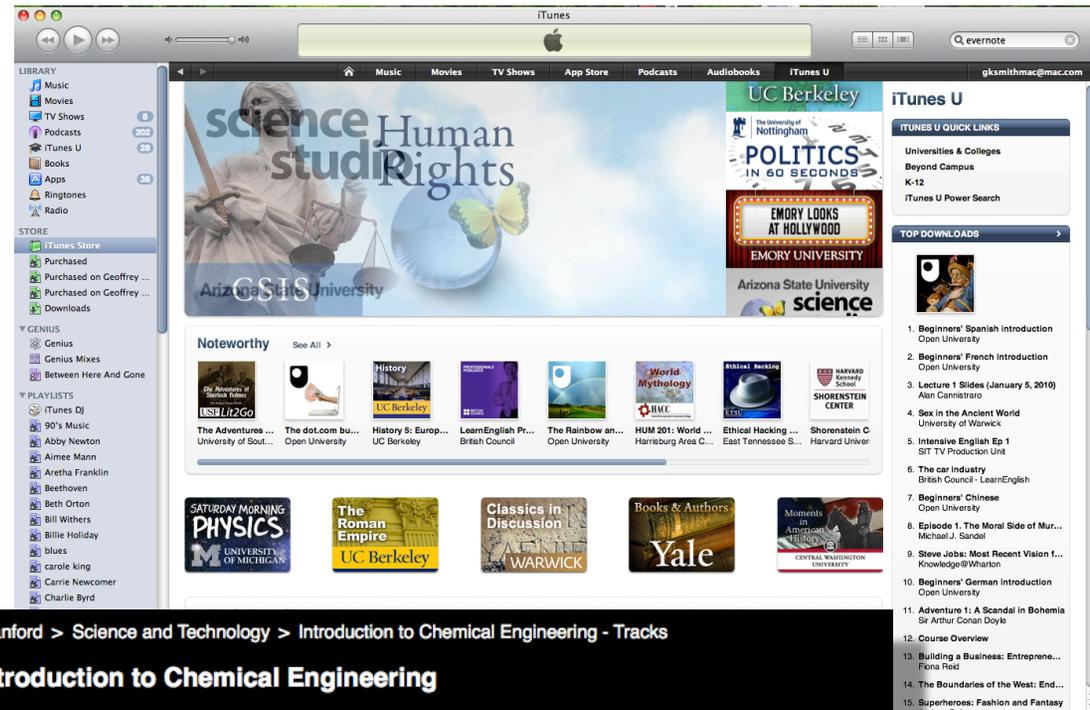
Have your own Cloud...

- Clouds aren't just for corporations any more.
- Amazon provides you with your own electronic library where you can archive books, music movies and more...
- Apple has Mobile Me which provides you with virtual disk space, the ability to synchronize mail, contacts, calendars, photos and more... across multiple devices.
- Evernote support a number of devices and lets you keep notes, pictures, web clips
- Microsoft's new PC ... the "Personal Cloud"
- Huddle App – network of secure workspaces where you can share files, manage projects, organize virtual meetings



College Courses to Go...on iTunes U

- Take a refresher on Physics
- Learn a new language
- iPods, aren't just for music anymore...
- With the ubiquitous nature of portable devices and the adoption of POD and VOD casts have made take a course as easy as a click away.
- These courses are real college classes on a wide variety of subjects by a wide variety of universities ... most if not all FREE.
- They are available on iPhone, iPad, iPods, Apple TV, PCs anything capable of hosting iTunes material



Stanford > Science and Technology > Introduction to Chemical Engineering - Tracks

Introduction to Chemical Engineering

Channing Robertson
 Last Modified: Jul 23, 2010
 Tracks in Tracks: 23

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STANFORD UNIVERSITY
Introduction to Chemical Engineering
DESCRIPTION

Introduction to Chemical Engineering (E20) is an introductory course offered by the Stanford University Engineering Department. It provides a basic overview of the chemical engineering field today and delves into the applications of chemical engineering.

Stellar Cellular

- Most cellular phone companies now offer devices that act as mini-cell towers. It uses an existing internet connection such as cable or DSL. These help deal with the all too common situation of weak cell signals inside or in remote areas. They are commonly called “Femtocell” devices.
- Some common brand names are
 - T- Mobile Mobile Hotspots
 - Sprint Airave
 - Verizon Wireless Network Extender
 - AT&T MicroCell



- There are also devices that use cellular data networks to create instant Wi-Fi networks that multiple devices can share

- Verizon MiFi 2200



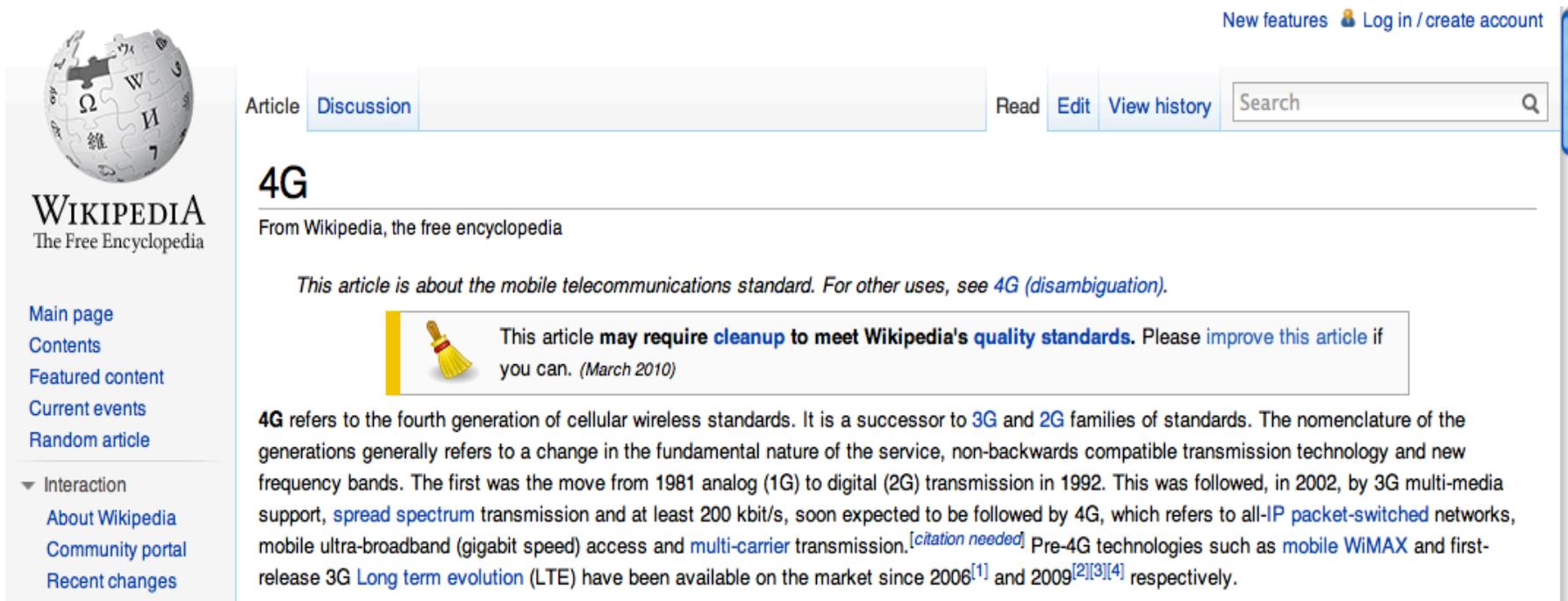
- Sprint now offers the Overdrive G4 mobile hotspot
- Some cell phones offer MiFi
- Others offer tethering
 - With tethering you use either a cable or Bluetooth connection to provide your laptop with internet connectivity via a cellular data network
 - Many laptop and netbook computers have built-in cellular modems, so tethering is not needed
 - AT&T now offers tethering a plan for iPhone tethering



G-Wiz

So you finally bought your new 3G phone and you thought you were all set for awhile.

Not so fast! 4G is here, and you are going to want it.



The screenshot shows the Wikipedia article for "4G". At the top right, there are links for "New features", "Log in / create account", and a search box. Below the search box are tabs for "Article", "Discussion", "Read", "Edit", and "View history". The article title "4G" is prominently displayed, followed by the text "From Wikipedia, the free encyclopedia". A notice box with a broom icon states: "This article may require cleanup to meet Wikipedia's quality standards. Please improve this article if you can. (March 2010)". The main text of the article begins with "4G refers to the fourth generation of cellular wireless standards. It is a successor to 3G and 2G families of standards. The nomenclature of the generations generally refers to a change in the fundamental nature of the service, non-backwards compatible transmission technology and new frequency bands. The first was the move from 1981 analog (1G) to digital (2G) transmission in 1992. This was followed, in 2002, by 3G multi-media support, spread spectrum transmission and at least 200 kbit/s, soon expected to be followed by 4G, which refers to all-IP packet-switched networks, mobile ultra-broadband (gigabit speed) access and multi-carrier transmission. [citation needed] Pre-4G technologies such as mobile WiMAX and first-release 3G Long term evolution (LTE) have been available on the market since 2006[1] and 2009[2][3][4] respectively."

But wait! There's more...

- I neglected to mention a couple of other tips in the original presentation, so I'm adding them before I upload them to the SHARE site.
- 1. Skype, it's not just for laptops anymore. Skype has an app for iPhone and probably other cell phones, so if your phone has wireless capability and are some place where wireless is available, use Skype to make the call instead of using your minutes.
- 2. Are you tired of slow PC performance? Consider replacing your old laptop drive with a solid state one. That's right, it's like having 30GB or more of memory in your laptop, but it when you power off your laptop, the content doesn't go away. When you look for them, just Google "laptop ssd"
- SSD Advantages:
 - Wicked Fast! You'll be amazed at how fast things boot! They are getting to be affordable.
 - Less susceptible to damage from shock
- http://en.wikipedia.org/wiki/Solid-state_drive



[http://
www.skype.com/
mobile/reminder/](http://www.skype.com/mobile/reminder/)



Thank You and Happy Computing!

