Absolutely Mobile

# Overview

What is the role of mobile computing in modern life, and how can we harness its power to achieve concrete goals in the workplace, in our schools, and in our homes? Come join this day and a half tour though the mobile landscape and up into the clouds. Learn what mobile devices are available and how you can harness their power. Learn what they can and can’t do, learn when to feel safe and when to worry. Come join us as we explore the rapidly changing world of mobile and cloud computing.

# Day One: Friday

## Morning

### Session One: Mobile Impact

* The history of mobile devices: What a long strange trip!
* Mobile devices from A – Z. What is on the market, how popular is it, and what does it do?
* Using mobile to devices to access spreadsheets, documents and databases

### Session Two: Hands On

* Use a virtual machine to simulate an Android Phone
* Learn the major features found on a mobile device and how to interact with them.
* Access the cloud from a virtual phone or tablet

### Session Three: Lunch

* Eat, drink and be merry

## Afternoon

### Session Four: Data in the Clouds

* Migrating Data from Corporate Headquarters (or your hard drive) to the Cloud
* Economics and Technology.
* Key Terms: Software as a Service, Platform as a Service, Infrastructure as a Service
* Grids, Meshes, Virtual Machines and Hadoop: Technology in the Data Center

### Session Five: Hands On

* Learn through practice: How to use the cloud from a mobile device
* You can do it: Mobile Devices, Google Apps and Microsoft Office Online
* Hosting your own platform in the Cloud: MediaWiki and WordPress
* Publish data in ebooks: Creating Kindle books for Mobile devices. Mobi and EPub formats.
* Find a home in the Cloud: SpringPad, Evernote, Kindle Mobile, and other tools of the trade.

# Day Two: Saturday

This second day is designed as a deep dive into the more technical side of mobile computing. If you have a little experience with writing code, or want to find a way to learn how to begin, these sessions should be of interest.

## Morning

### Session Six: HTML5, CSS and JavaScript

* Open Source and Open Standards
* Linux, XML, JSON, Java: What does it all mean?
* Adaptive Web Design: Howl HTML5, CSS and JavaScript enable Mobile and Desktop Computing.

### Session Seven: The Android SDK and PhoneGap

* Java, Eclipse and The Android SDK: How to set up a machine to target Android Development
* A Hello World application.
* Debug a program that runs on a device.
* A Peek Around the Corner: The Dalvik Virtual Machine, web services and databases.

# Summary

Review what we have learned about how to use mobile devices to access data.

In Depth View of the Course

## Introduction

What is the role of mobile computing in modern life, and how can we harness its power to achieve concrete goals in the workplace, in our schools, and in our homes? Come join this day and one half tour though the mobile landscape and up into the clouds. Learn what mobile devices are available, what they can and can’t do, and how you can harness their power.

The young rightly have an insatiable appetite for change, and a love of everything new. Yet when I hear really smart young people talk about technology, I hear not only excitement, but also wariness. Change is happening so fast that even the very brightest fear they might not be able to keep up. And the rest of us? How do we adapt to a world in which far reaching, widely used technologies change not once in a century, not once in a generation, not even once in a decade, but once every three to five years?

Ten years ago there were no IPhones, no IPads, no Androids, and no Cloud. Maybe a few thousand people strung out along the coasts of various countries owned an eBook reader, but few of them actually used it. Most people had never heard of texting, let alone sexting, crowdsourcing and tweeting. Now these things are ubiquitous, and our greatest fear is that our 10 year old children understand them better than we do.

Is it all a chimera, a phantasmagoria, or are the cloud and mobile devices going to change the way businesses are run, the way information is stored and consumed, the way education shapes the lives of both the young and old? What are these devices, and how can we harness them to make our lives not merely faster and more superficial, but more productive?

# Day One: Friday

## Session One: Mobile Impact

Come meet the Mobile Devices. Attendees will learn about the history of mobile computing, and the major players in the current market.

* Who remembers Adam Osborne?
* Journey from the Palm Pilot to the 21st Century world of IPhones and Androids
* Who’s on Top: Statistics, Lawsuits and Cutthroat Competition in the Global Marketplace

In 1970 computing seemed like a staid world dominated by a few big players, primarily IBM. Then along came Apple, Microsoft and the dynamic world of Internet development. The computer industry turned upside, down: small was big. The center of the industry moved from the mainframe to the PC.

Yet time changes everything, and soon PCs began to seem as gray, faceless, and irrevocably fixed in the landscape as mainframes had twenty years before. In the late-night nineties and much of the dreadful oughts, it seemed like Microsoft ran the world, and no one could stand against the juggernaut from Redmond.

When it first stepped blinking onto the stage, the IPod seemed like little more than an aberration, a tiny nick in the armor of the big PC’s that sat by everyone’s desk. But it was harder to laugh at the impact of the IPhone. And to everyone’s surprise, IPads and Androids suddenly made the PC seem a quaint relic gathering dust in Egyptian Museum.

What the heck is an ARM processor and why do they need a 1.0 GHZ dual core? Is gigahertz actually a real word or is someone just trying have me on? What if I can’t tell a TFT capacitive touch screen from an etch-a-sketch?

Can we really take these little devices seriously? How do we use a phone, of all things, to access information? Can I read a spreadsheet on an IPhone, access a database from an Android? What about the Bellevue College network, is it off bounds? Do serious people actually use Twitter and an IPhone to get real work done? Can I access the files on my hard drive with a $400, 10.1 inch tablet when I’m trapped in the Nashville airport, lounging on a tropical beach, or up late at night with a chronic case of twenty-first century workplace anxiety?

## Session Two: Hands On

It’s time to stop talking and get our hands on real technology. In this session you will sit down at a PC and use simulated mobile devices to access the cloud. Launching the Android operating system from a Windows PC may seem like a surreal undertaking, but it can be a good introduction to key technologies such as:

* Mobile Devices
* Virtual Machines
* Cloud Computing

## Session Three: Lunch

Something we can all understand: food!

## Session Four: It’s Cloud Illusions I Recall

Set my people free! Moses led the downtrodden to the Promised Land. Arctic terns migrate from Tierra del Fuego to Alaska. Mao led his people on the Long March from Jiangxi province to Shaanxi. Can we migrate our data from our rusty hard drives to the cloud?

What is Software as a Service? Can something named hadoop actually be a key technology used by the largest Fortune Five Hundred companies to store their most valuable data? What is mesh computing and how does it differ from a virtual machine? Can I find a place for my student’s scores in the cloud? What about my poems, or my – gulp – checkbook? Is the cloud safe?

How can we setup our own cloud services? I host MediaWiki and WordPress on my own website, and I will explain how you can do the same. When you start hosting your own cloud applications, then you can customize content in any way you want, providing the your audience the information and services that they need.

If you know HTML, it is easy to publish your data as an ebook that can be displayed on mobile device with Kindle Mobile or the Android ebook readers. We’ll take a little time to describe how it is done.

## Session Five: Hands On

In this hands on session we Learn how to use Google Docs, Microsoft Office and some strange third party startups to store our life’s work in the cloud. Yes, we can access our networks and our data from our home PCs, from our laptops, from our tablets, and from our phones. But is it safe? Is it practical? Is it – most of important of all – easy?

# Day 2: Saturday

## Session Six: HTML5, CSS and JavaScript

Open Source and open standards are the kinds of phrases we find lurking somewhere in the back of our consciousness like shadowy phantoms; somehow simultaneously tangible and yet mysteriously elusive. Why are standards so important in the world of mobile devices and cloud computing, and how can I use them to get real work done?

Learn about HTML5, CSS, JavaScript, Java, XML, JSON, Linux, Android and other open standards that drive huge swaths of the 21 Century economy. See how Adaptive Web Design can help you write a single HTML file that displays correctly on Desktops, Mobile Devices and Tablets. Why are these technologies important and can I ever actually use them to do something useful? If I can’t use them, can I at least learn what they are and why they are important?

# Session Seven: The Android SDK

Okay, enough high level concepts. I want to compile real objects on the Dalvik Virtual Machine and access Android services, broadcast messages, and retrieve data from a SQL database. Wait, is that right? Are there really SQL databases on Android phones? Yes, there is that much more. Learn how you can teach your phone to run a multithreaded app that accesses remote web services!

Well, okay, we won’t be able to cover all that in one hour, but we can write a HelloWorld application, and see how to use the Android SDK to access some of the core services on an Android phone. Just learning the tools you need, and how to set them up, can be a great introduction to the world of mobile development for those who are perhaps a bit pathologically technical. For everyone else? Heck, it’s Saturday. Go outdoors with your kids or significant others. Get out and have some fun and leave the zeros and ones to the folks with the pale skin and the pocket protectors! You know who you are!