

CSC 471 / 371
Mobile Application
Development for iOS




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Outline

- What is mobile computing?
- The convergence:
mobile + computing
- The story of Apple Inc.
- The story of iOS





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What is Mobile Computing?

- Computing technologies centered around mobile devices.
- (a computing device that is)
... an iPod, a Phone, an Internet communicator, ...
– Steve Jobs, 2007

Mobile Computing =
Computation + Mobility + Connectivity

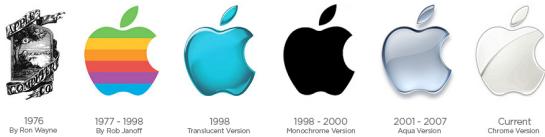
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Elements of Mobile Computing

- Mobile hardware, devices
 - CPU, GPU, memory, network connectivity
- Mobile software
 - Mobile platforms, and apps
- Mobile connectivity
 - Wireless Internet, WIFI, Bluetooth, cellular network
- Human Computer Interaction
 - Alternative input mechanisms: touch, motion, voice
 - User interface design

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A Brief History of Apple & iOS, & others

1976 By Ron Wayne
1977 - 1998 By Rob Janoff
1998 Translucent Version
1998 - 2000 Monochrome Version
2001 - 2007 Aqua Version
Current Chrome Version

The Story of Apple – The Apple I, 1976



• Apple Computer Inc. incorporated on April 1, 1976 in Los Altos, CA

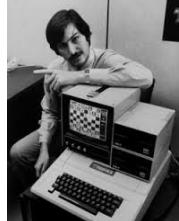
• Founders Steve Jobs and Steve Wozniak

Apple I, 1976
Homebrew Computer Club,
Palo Alto, CA, \$666, ~200 units sold




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The Story of Apple – The Apple II, 1977

Apple II, 1977
Retail \$1,298, ~6 million units sold

- Introduced June 10, 1977
- First highly successful and mass produced PC

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Graphical User Interface (GUI) 1973-1981, Xerox PARC



The invention of GUI

- Windows, icons, menus, etc.
- The Xerox Star workstation

The invention of the mouse

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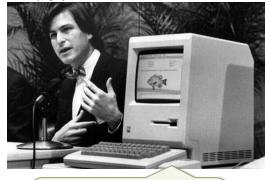
The Macintosh Apple Computer, 1984



- Steve Jobs visited Xerox Parc in the winter of 1979
“What is going on here? You’re sitting on a gold mine! Why aren’t you doing something with this technology? You could change the world!”
- The first PC with a Graphical User Interface (GUI) and a mouse

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The Macintosh Launch, 1984




Macintosh, 1984
Retail \$2,495, 72,000 units sold in the first 100 days

Was George Orwell right?

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Motorola DynaTAC 1983, Motorola Corp.



- Inventor, Martin Cooper
- The first cell phone approved for commercial use.
- Weight: 2lb

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The Oust of Jobs, 1985




- Steve Jobs was forced out of Apple by CEO John Sculley, May 1985
- Sold all but one of his 6.5 million shares
- Acquired Pixar (\$5 million)
- Started NeXT Inc.
 - Introduced the NeXT computer in 1988
 - Retail \$6,500, ~50,000 units sold
 - Operating System: NeXTSTEP
 - Tim Berners-Lee used a NeXT Computer in 1990 to create the first web browser and web server.

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Newton Message Pad Apple Computer, 1993



- The first commercially available hand-held computer
- Pioneer of Personal Digital Assistant (PDA)
- Weight: 1.4 lb
- ARM 610 CPU, 32-bit
- 4 MB ROM, 640 KB RAM
- 336 x 240 BW display
- Handwriting recognition



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Palm Pilot 1000 US Robotics, 1996



- The first commercially successful personal digital assistant (PDA)
- Stylus input
- Graffiti handwriting recognition
- Infrared port

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BlackBerry Quark 2003, Research in Motion



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The Rise of Windows



- Microsoft launched Windows 3.0 on May 22, 1990
 - The first Microsoft GUI Operating System
 - 2 million copies sold in the first 3 months
- Windows 3.1 released on March 1, 1992
 - Dominated the market share 85.7% (Mac OS 6.7%)
- Apple sued Microsoft for copyright infringement
- Windows 95 released on August 24, 1995
 - Windows, all versions, 88.6% (Mac OS 4.6%)
- DOJ opened investigations of Microsoft for abusing its monopoly position of Windows



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The Return of Jobs, 1997



- Apple acquired NeXT for \$429 million, December 20, 1996.
 - Use NEXTSTEP as a foundation to replace Mac OS
- Steve Jobs back to Apple as a consultant
- Apple board ousted CEO Gil Amelio, July 9, 1997
 - Steve Jobs named *interim* CEO, later CEO
 - Until his resignation on August 24, 2011
- Microsoft invested \$150 million in Apple



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The Comeback



- iMac, August 15, 1998
- iPod & iTune, October 2001
 - iTunes logo and slogan "A new spin on music...forever."
- Mac OS X, March 2001
 - Mac OS X logo



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iPhone
June 2007, Apple Computer



- The first integrated smart phone
- Multi-touch interface
- Virtual keyboard
- WIFI & 3G

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iPad Tablet Computer
April 2010, Apple Computer



- The first commercially successful tablet computer

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The Most Influential Tech Products Over the Past Two Decades

1. **Newton MessagePad** (1993)
2. Netscape Navigator (1994)
3. Windows 95 (1995)
4. The Palm Pilot (1997)
5. Google Search (1998)
6. **The iPod** (2001)
7. Facebook (2004)
8. Twitter (2006)
9. **The iPhone** (2007)
10. Android (2008)
11. **The MacBook Air** (2008)
12. **The iPad** (2010)



Walter Mossberg
WSJ,
Dec 17, 2013

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Apple Joins Dow Jones 30 (DJIA)

- March 19, 2015, Apple replaced AT&T in DJIA
- APPL traded on NASDAQ
 - Went public Dec. 12, 1980 at \$22 per share
 - 2-for-1 split in 1987, 2000, 2005, 2014
 - Closing price on Dec. 11, 2015, \$113.18 per share
- Apple is now the world's most valuable company
 - Market capitalization: ≈ \$656 Billion.

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Hello, iOS 9 and watchOS 2



- Released in September 2015
- Installed on more than 50% of active iOS devices in one week.
- Installed on 70% of compatible Apple devices (as of end of 2015).

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What's New in iOS 9



- Multi-tasking
 - Slide over
 - Split screen
 - Picture-in-Picture

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What's New in iOS 9



- 3D touch (force press)
 - Pressure sensitive touch
- App thinning
 - Slicing
 - Bitcode
 - On-demand resource
- User experience improvements
 - Search
 - Proactive suggestions

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What's New in iOS 9



- Watch Kit, Home Kit, Health Kit
- Wireless Car Play
- New enhancement to Swift
 - Swift 2.1
- SDK improvements
 - Stack view
 - Storyboard references
 - UI testing

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Next ...

- Set up the development environments
- Get to know Xcode
- Build your first iOS app

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