Brief Intro on Mobile Platforms and Dev. Tools

Top Mobile Operating Systems

- Android by Google Inc.

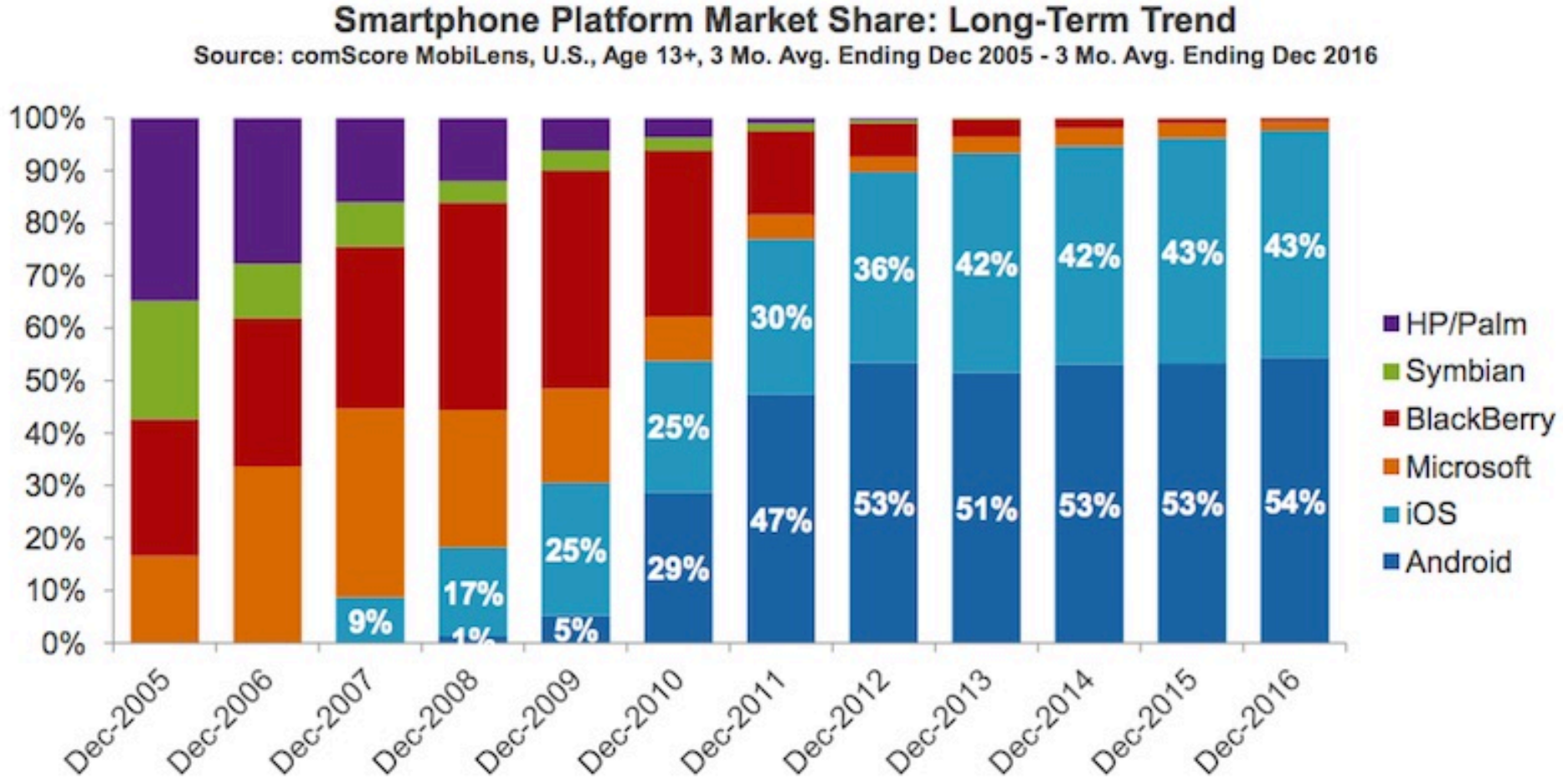
- iOS by Apple Inc.

- BlackBerry OS by RIM

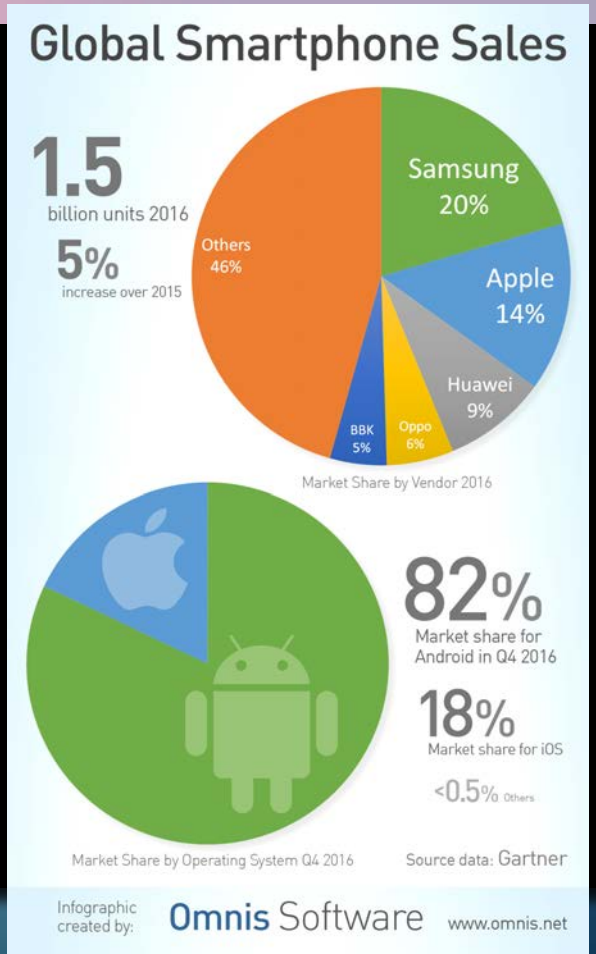
- Symbian OS by Nokia and Accenture

- Windows 8 by Microsoft

Brief Intro on Mobile Platforms and Dev. Tools

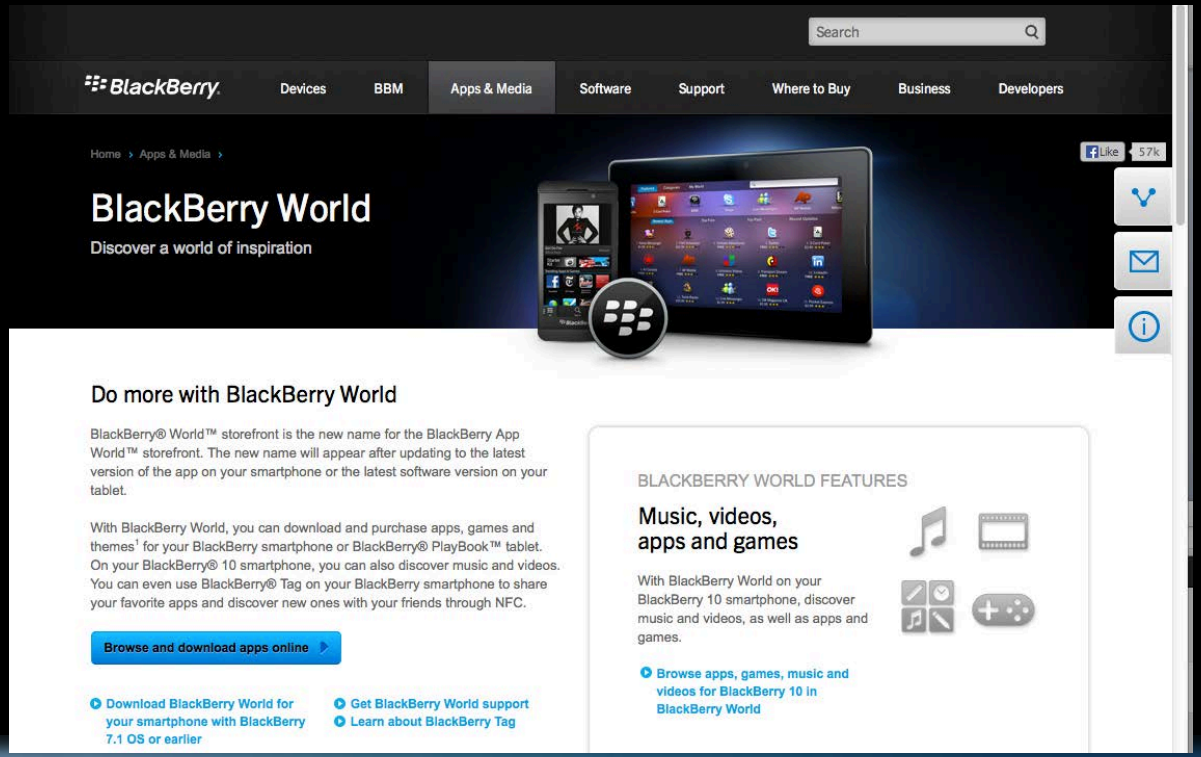


Brief Intro on Mobile Platforms and Dev. Tools



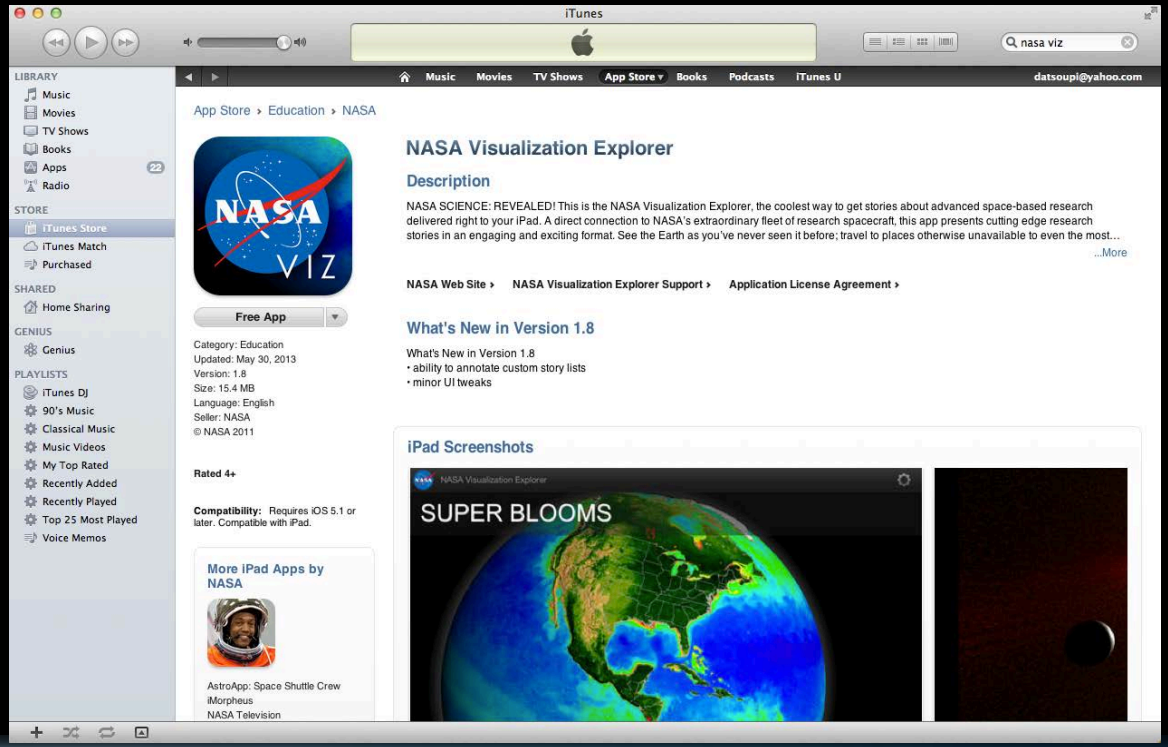
Top Mobile Operating Systems Markets

BlackBerry World



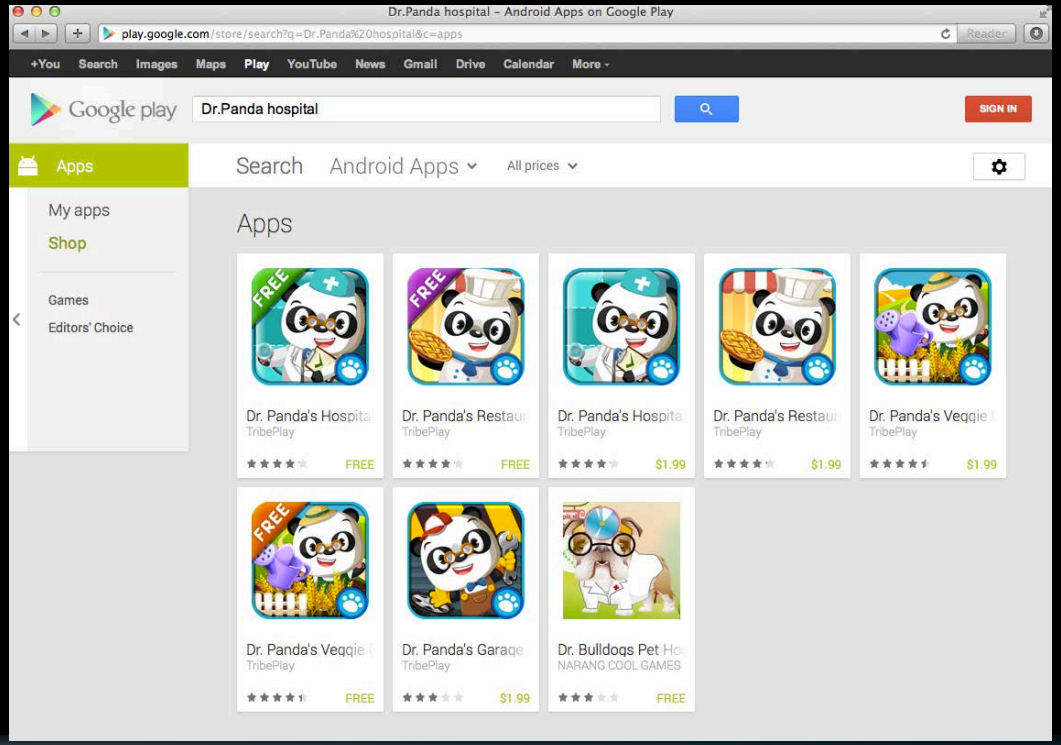
Top Mobile Operating Systems Markets

Apple's iTunes



Top Mobile Operating Systems Markets

Google Play/Android Market



Brief History of Devices

1979–1992 Mobile phones use embedded systems to control operation.

1994 The first smartphone, the IBM Simon, has a touchscreen, email and PDA features.

Brief History of Devices

1996 Palm Pilot 1000 personal digital assistant is introduced with the Palm mobile OS.

Brief History of Devices

2000 Symbian became the first modern
mobile OS on a smartphone with the launch of the Ericsson R380.

Brief History of Devices

2002 Microsoft's first Windows CE (Pocket PC) smartphones are introduced.

2002 BlackBerry released its first smartphone.

2007 Apple iPhone with iOS is introduced as an iPhone, "mobile phone" and "internet communicator."

Brief History of Devices

2008 OHA releases Android 1.0 with the HTC Dream (T-Mobile G1) as the first Android phone.

Brief History of Devices

2009 Palm introduces webOS with the Palm Pre. By 2012 webOS devices were no longer sold.

2009 Samsung announces the Bada OS with the introduction of the Samsung S8500.

Brief History of Devices

2010 Windows Phone OS phones are released but are not compatible with the previous Windows Mobile OS.

2011 MeeGo the first mobile Linux, combining Maemo and Moblin, is introduced with the Nokia N9, a collaboration of Nokia, Intel and Linux Foundation.

2012 The Lenovo K800 will be the first Intel powered Smartphone (Android OS).

Brief History of iPhone

The Newton MessagePad was an early handheld device manufactured by Apple in the mid-1990s. Some of its concepts and functions have been incorporated into the iPhone.

Brief History of iPhone

On January 9, 2007 Steve Jobs announced the iPhone at the Macworld convention, receiving substantial media attention, and that it would be released later that year.

On June 29, 2007 the first iPhone was released.

Brief History of iPhone

First iPhones were sold exclusively with AT&T contracts in the United States.

On February 10, 2011, the Verizon iPhone went on sale.

T-Mobile USA's inability to provide the iPhone to customers raised its subscription churn rate, and contributed to parent Deutsche Telekom's decision to sell it to AT&T in March 2011.

Brief History of iPhone

On July 1, 2007, it was reported that Apple paid at least US$1 million to Michael Kovatch for the transfer of the iPhone.com domain name. Kovatch registered the domain in 1995.

September 21, 2012 the 6th-generation iPhone 5 was released.

iPhone 5S – September 2013

iPhone 6 - 2014

iPhone 6S - 2015

iPhone 7 – 2016

iPhone SE - 2016

Brief History of iPhone

Generations

1st 3G 3GS 4 4S 5 5S 6 6S 7 8

Apple has now sold 1.2 billion iPhones

The 10th anniversary iPhone release iPhone 8 - 2017

glass and stainless steel redesign , bezel-less OLED display, facial recognition, updates to 3D Touch, improved waterproofing, wireless charging, and more

iPhone evolution

iPhone evolution

iPhone Sensors

Proximity sensor

Ambient light sensor

Accelerometer

Gyroscope

Magnetometer

Moisture sensor

Compass & GPS

Fingerprint sensor

iPhone8 -- time-of-flight sensor (ToF) a new type of proximity sensor on the front side of the phone, one that also acts as an “accurate rangefinder for the selfie camera.”

iPhone Sensors

time-of-flight sensor (ToF)

likely to be a new product in the iPhone 8, in addition to on-going shipments of the time-of-flight sensor," from Liberum analyst Janardan Menon

a recent report said that the new iPhone will include a new form of facial/gesture recognition system. This feature would be "supported by a new laser sensor and an infrared sensor mounted near the front-facing camera," by Cowen and Company analyst Timothy Arcuri

iPhone Sensors – Proximity Sensor

This sensor can determine how close the iPhone is to your face. Turns off its screen automatically whenever you hold the phone up to your ear.

This is necessary to prevent accidental button clicks by the side of your head when talking.

iPhone Sensors – Ambient Light Sensor

This sensor can determine how much light is available in the area surrounding the iPhone and automatically adjust the brightness of the screen in order to conserve battery life.

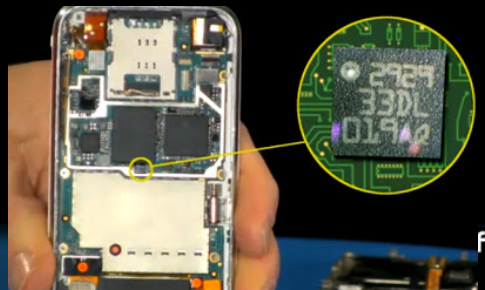
iPhone Sensors – Motion Sensor/Accelerometer

This sensor enables the iPhone's screen to automatically switch from landscape to portrait modes and back again based on whether you're holding the phone up and down or sideways.

-detects the acceleration the phone is experiencing when you move with it

- detects the g-force associated with the movement
- automatically orients the phone according to the position you are holding it in

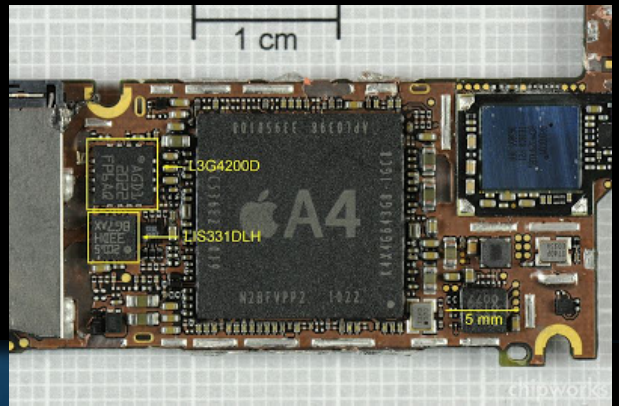
Youtube video on accelerometer



iPhone Sensors – Gyroscope

iPhone 4 Gyroscope (tilt/orientation)
The iPhones 4, 4S and 5 add another sensor:
a three-axis gyroscope. When combining the gyroscope with the accelerometer, this gives these devices six axes on which it can operate. This is designed to make them more sensitive, responsive, and powerful for gaming.

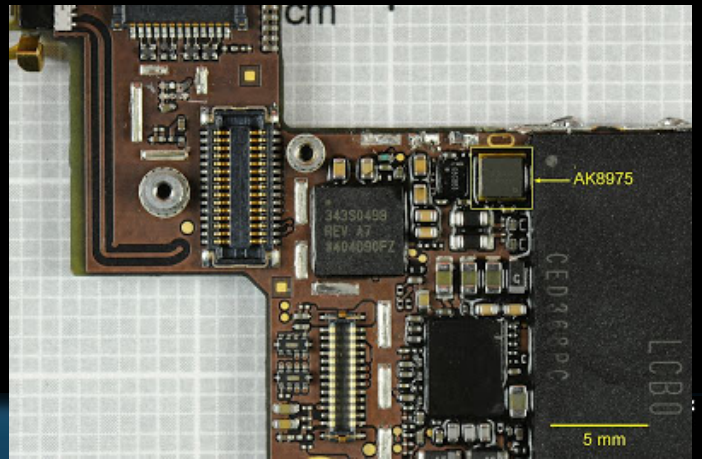
[iPhone4 Gyroscope demo]



iPhone Sensors – Magnetometer Compass

It can measure the strength of the magnetic field experienced by your smartphone, in Tesla (the unit of magnetism).

With the preinstalled compass app that works with this magnetometer, your smartphone can easily tell you which way is north and which is south. This is one of the most useful features of current smartphones.



Moisture Sensor

The water sensor is a little red tab that appears in the dock connector when the phone has been submerged in water. It can also appear as a red dot in the headphone jack.

[Water sensor on yotube]

iPhone 4	
iPhone 3G/iPhone 3GS	
iPhone	
iPod touch	
iPod nano	
iPod classic	

iPhone Sensors – GPS

The Global Positioning System, GPS is a sensor that relies on connection to three or four satellites to gather information about your phone's global position.

Production Process

- Design a mobile application UI/UX.
- Program for the device (iOS, Android etc.).
- Acceptance by the distributor (Google/Apple).
- Storefront market release (iTunes, Google Play, etc.)