

Android: Introduction

History

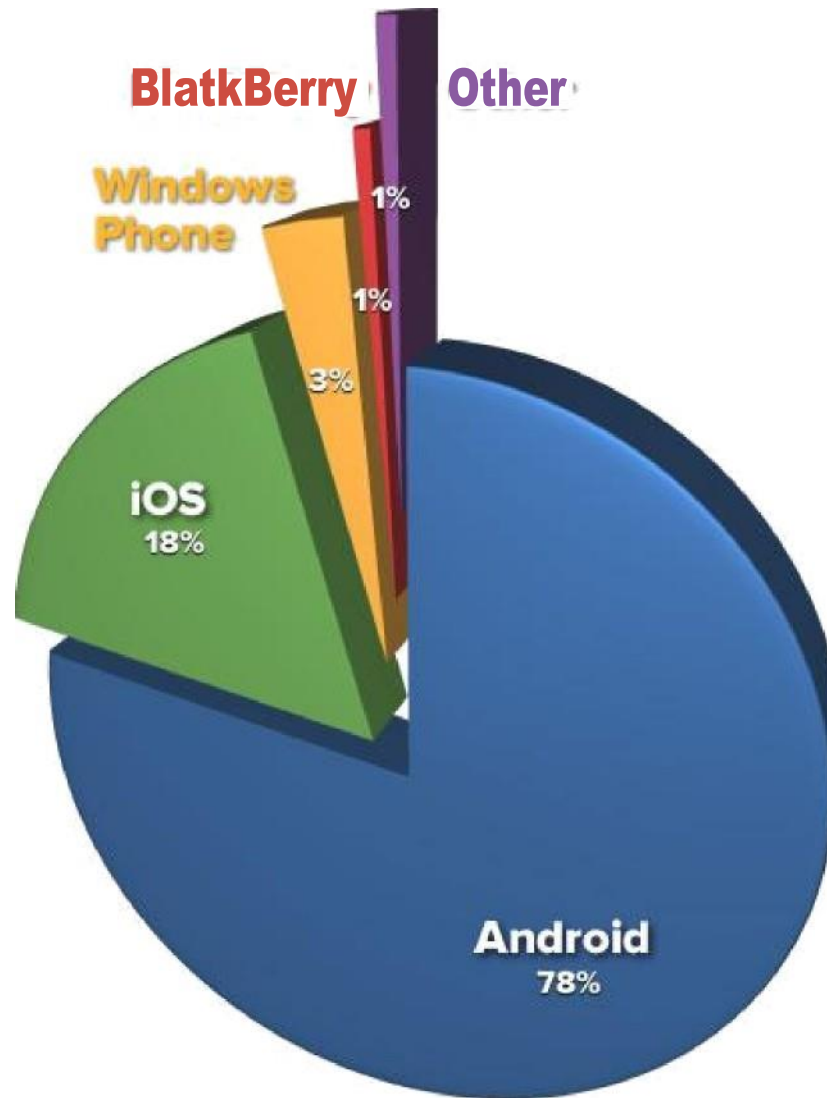
ANDROID



What is Android?

- A software stack for mobile devices that includes
 - An operating system
 - Middleware
 - Key Applications
- Uses Linux to provide core system services
 - Security
 - Memory management
 - Process management
 - Power management
 - Hardware drivers

MOBILE OS SHARE Q4 2013



Source: TheNextWeb

<http://thenextweb.com/mobile/2014/02/12/>

idc-android-ios-accounted-91-7-global-smartphone-shipments-q4-2013-93-B-year/

Top Five Smartphone Operating Systems, Worldwide Shipments, and Market Share, 2014Q2

Operating System	2Q14 Shipment Volume	2Q14 Market Share	2Q13 Shipment Volume	2Q13 Market Share	2Q14/2Q13 Growth
Android	255.3	84.7%	191.5	79.6%	33.3%
iOS	35.2	11.7%	31.2	13.0%	12.7%
Windows Phone	7.4	2.5%	8.2	3.4%	-9.4%
BlackBerry	1.5	0.5%	6.7	2.8%	-78.0%
Others	1.9	0.6%	2.9	1.2%	-32.2%
Total	301.3	100%	240.5	100%	25.3%

The Android Story

- Android is the operating system that powers more than one billion smartphones and tablets.
- Initially developed by Android, Inc., which Google backed financially and later bought in 2005.
- Android was unveiled in 2007 along with the founding of the **Open Handset Alliance**—a consortium of hardware, software, and telecommunication companies devoted to advancing open standards for mobile devices.
 - Each Android version is named after a dessert.
 - Since these devices make our lives so sweet
- Each Android release makes something new possible.

The Android Story...

- Android is a mobile operating system (OS) based on the Linux kernel and currently developed by Google.
- Android is designed primarily for touchscreen
 - mobile devices such as smartphones and tablet computers, with specialized user interfaces for televisions (Android TV), cars (Android Auto), and wrist watches (Android Wear).
 - The OS uses touch inputs that loosely correspond to real-world actions, like swiping, tapping, pinching, and reverse pinching to manipulate on-screen objects, and a virtual keyboard.
- Despite being primarily designed for touchscreen input, it also has been used in game consoles, digital cameras, regular PCs (e.g. the HP Slate 21) and other electronics.

The Android Story...

A business alliance consisting of 47 companies to develop open standards for mobile devices



Phones



HTC G1,
Droid,
Tattoo



Motorola Droid (X)



Suno S880



Samsung Galaxy



Sony Ericsson

Tablets



Velocity Micro Cruz



Gome FlyTouch

Acer beTouch



Dawa D7



Toshiba Android
SmartBook



Cisco Android Tablet

Android	
Developer	Google , Open Handset Alliance
Written in	C (core) , C++ , Java (UI)
OS family	Unix-like
Working state	Current
Source model	Open source and in most devices with proprietary components
Initial release	September 23, 2008
Latest release	5.0.2 Lollipop / December 19, 2014; 11 days ago
Latest preview	5.0 Lollipop developer preview / October 17, 2014; 2 months ago
Marketing target	Smartphones , tablet computers , TVs , cars and wearable devices
Available in	Multi-lingual (46 languages)
Package manager	Google Play , APK
Platforms	32-bit and 64-bit ARM , ¹⁷¹ MIPS , ¹⁰¹ x86 , x86-64
Kernel type	Monolithic (modified Linux kernel)
Userland	Bionic libc , ¹⁹¹ mksh shell, ¹⁰¹ native core utilities with a few from ¹¹¹¹ NetBSD
Default user interface	Graphical (Multi-touch)
License	Apache License 2.0,Modified Linux kernel under GNU GPL v2
Official website	www.android.com

Android Version

- The version history of the Android mobile operating system began with the release of the Android beta in November 2007.
- The first commercial version, Android 1.0, was released in September 2008.
- Android is under ongoing development by Google and the Open Handset Alliance (OHA), and has seen a number of updates to its base operating system since its initial release.
- Since April 2009, Android versions have been developed under a confectionery-themed code name and released in alphabetical order;
 - the exceptions are versions 1.0 and 1.1 as they were not released under specific code names:

Android Versions...

- Alpha (1.0)
- Beta (1.1)
- Cupcake (1.5)
- Donut (1.6)
- Eclair (2.0–2.1)
- Froyo (2.2–2.2.3)
- Gingerbread (2.3–2.3.7)
- Honeycomb (3.0–3.2.6)
- [Ice Cream Sandwich](#) (4.0–4.0.4)
- [Jelly Bean](#) (4.1–4.3.1)
- KitKat (4.4–4.4.4)
- [Lollipop](#) (5.0–5.0.2)

Android Brief History

- 2005
 - Google acquires startup Android Inc. to start Android platform
 - Work on Dalvik VM begins
- 2007
 - Open Handset Alliance announced
 - Early look at SDK
- 2008
 - Google sponsors 1st Android Developer Challenge
 - T-Mobile G1 announced
 - SDK 1.0 released
 - Android released open source (Apache License)
 - Android Dev Phone 1 released

Android Brief History...

- 2009
 - SDK 1.5 (Cupcake)
 - New soft keyboard with “autocomplete” feature
 - SDK 1.6 (Donut)
 - Support Wide VGA
 - SDK 2.0/2.0.1/2.1 (Eclair)
 - Revamped UI, browser
- 2010
 - Nexus One released to the public
 - SDK 2.2 (Froyo)
 - Flash support, tethering
 - SDK 2.3 (Gingerbread)
 - UI update, system-wide copy-paste

Android Brief History...

- 2011
 - SDK 3.x (Honeycomb)
 - Optimized for tablet support
 - SDK 4.0 (Ice Cream Sandwich)
 - Virtual UI buttons
- 2012
 - SDK 4.1.1 (Jelly Bean)
 - Triple buffered graphics pipeline
- 2013
 - Android 4.4 KitKat (API level 19) 2.11.1 Android 4.4 KitKat with wearable extensions (API level 20)
- 2014
 - Android 5.0 Lollipop (API level 21)

Android versions



Cupcake
Android 1.5

**Android 1.5,
Cupcake**



**Android 1.6,
Donut**

Android Versions...



**Android 2.0,
Éclair**



**Android 2.2,
Froyo**

Android Versions...



Android 2.3, Gingerbread

**Android 3.0,
Honeycomb**

Android Versions...



**Android 4.0,
Ice Cream Sandwich**



**Android 4.1, Jelly
Bean**

Android Versions...



**Android 4.4,
KitKat**



Android 5.0, Lollipop

Android 1.1 (API level 2)
Android 1.5 Cupcake (API level 3)
Android 1.6 Donut (API level 4)
Android 2.0 Eclair (API level 5)
Android 2.0.1 Eclair (API level 6)
Android 2.1 Eclair (API level 7)
Android 2.2–2.2.3 Froyo (API level 8)
Android 2.3–2.3.2 Gingerbread (API level 9)
Android 2.3.3–2.3.7 Gingerbread (API level 10)
Android 3.0 Honeycomb (API level 11)
Android 3.1 Honeycomb (API level 12)
Android 3.2 Honeycomb (API level 13)
Android 4.0–4.0.2 Ice Cream Sandwich (API level 14)
Android 4.0.3–4.0.4 Ice Cream Sandwich (API level 15)
Android 4.1 Jelly Bean (API level 16)
Android 4.2 Jelly Bean (API level 17)
Android 4.3 Jelly Bean (API level 18)
Android 4.4 KitKat (API level 19)
Android 4.4 KitKat with wearable extensions (API level 20)
Android 5.0 Lollipop (API level 21)

- For further details visit
- http://en.wikipedia.org/wiki/Android_version_history