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Mobile Operating Systems (Mobile OS) Explained

- Tweet

Updated February 06, 2018 / Posted August 10, 2011

By Vangie Beal

Related Terms

- mobile operating system (OS)
- operating system - OS
- Linux OS (Operating System)
- Fire OS
- Firefox OS
- Chrome OS
- Microsoft Windows XP operating system
- paravirtualized operating system
- operating system virtualization
- TOPS - transparent operating system

Much like the Linux or Windows operating system controls your desktop or laptop computer, a mobile operating system is the software platform on top of which other programs can run on mobile devices.

A mobile operating system, also called a *mobile OS*, is an operating system that is specifically designed to run on mobile devices such as mobile phones, smartphones, PDAs, tablet computers and other handheld devices.

> ***Editor's Pick:*** *Need help understanding mobile devices? This "The Difference Between a Cell Phone, Smartphone and PDA" article is an excellent starting point.*

What is a Mobile Operating System (Mobile OS)?

Much like the Linux or Windows operating system controls your desktop or laptop computer, a mobile operating system is the software platform on top of which other programs can run on mobile devices. The operating system is responsible for determining the functions and features available on your device, such as thumb wheel, keyboards, WAP, synchronization with applications, email, text messaging and more. The mobile OS will also determine which third-party applications (mobile apps) can be used on your device.

Types of Mobile Operating Systems

When you purchase a mobile device the manufacturer will have chosen the operating system for that specific device. Often, you will want to learn about the mobile operating system before you purchase a device to ensure compatibility and support for the mobile applications you want to use.

9 Popular Mobile Operating Systems

1. Android OS (Google Inc.)

The Android mobile operating system is Google's open and free software stack that includes an operating system, middleware and also key applications for use on mobile devices, including smartphones. Updates for the open source Android mobile operating system have been developed under "dessert-inspired" version names (Cupcake, Donut, Eclair, Gingerbread, Honeycomb, Ice Cream Sandwich) with each new version arriving in alphabetical order with new enhancements and improvements.

2. Bada (Samsung Electronics)

Bada is a proprietary Samsung mobile OS that was first launched in 2010. The Samsung Wave was the first smartphone to use this mobile OS. Bada provides mobile features such as multipoint-touch, 3D graphics and of course, application downloads and installation.

> ***Did You Know…?*** *In the computer industry, proprietary is the opposite of open. A proprietary design or technique is one that is owned by a company. It also implies that the company has not divulged specifications that would allow other companies to duplicate the product.*

3. BlackBerry OS (Research In Motion)

The BlackBerry OS is a proprietary mobile operating system developed by Research In Motion for use on the company's popular BlackBerry handheld devices. The BlackBerry platform is popular with corporate users as it

offers synchronization with Microsoft Exchange, Lotus Domino, Novell GroupWise email and other business software, when used with the BlackBerry Enterprise Server.

4. iPhone OS / iOS (Apple)

Apple's iPhone OS was originally developed for use on its iPhone devices. Now, the mobile operating system is referred to as iOS and is supported on a number of Apple devices including the iPhone, iPad, iPad 2 and iPod Touch. The iOS mobile operating system is available only on Apple's own manufactured devices as the company does not license the OS for third-party hardware. Apple iOS is derived from Apple's Mac OS X operating system.

> ***Editor's Pick:*** *Need help understanding Apple mobile devices? Webopedia's "iPhone, iPhone 3G, and iPhone 3G S - What's The Difference?" article will get you get started.*

5. MeeGo OS (Nokia and Intel)

A joint open source mobile operating system which is the result of merging two products based on open source technologies: Maemo (Nokia) and Moblin (Intel). MeeGo is a mobile OS designed to work on a number of devices including smartphones, netbooks, tablets, in-vehicle information systems and various devices using Intel Atom and ARMv7 architectures.

6. Palm OS (Garnet OS)

The Palm OS is a proprietary mobile operating system (PDA operating system) that was originally released in 1996 on the Pilot 1000 handheld. Newer versions of the Palm OS have added support for expansion ports, new processors, external memory cards, improved security and support for ARM processors and smartphones. Palm OS 5 was extended to provide support for a broad range of screen resolutions, wireless connections and enhanced multimedia capabilities and is called Garnet OS.

7. Symbian OS (Nokia)

Symbian is a mobile operating system (OS) targeted at mobile phones that offers a high-level of integration with communication and personal information management (PIM) functionality. Symbian OS combines middleware with wireless communications through an integrated mailbox and the integration of Java and PIM functionality (agenda and contacts). Nokia has made the Symbian platform available under an alternative, open and direct model, to work with some OEMs and the small community of platform development collaborators. Nokia does not maintain Symbian as an open source development project.

8. webOS (Palm/HP)

WebOS is a mobile operating system that runs on the Linux kernel. WebOS was initially developed by Palm as the successor to its Palm OS mobile operating system. It is a proprietary Mobile OS which was eventually acquired by HP and now referred to as webOS (lower-case w) in HP literature. HP uses webOS in a number of devices including several smartphones and HP TouchPads. HP has pushed its webOS into the enterprise mobile market by focusing on improving security features and management with the release of webOS 3.x. HP has also announced plans for a version of webOS to run within the Microsoft Windows operating system and to be installed on all HP desktop and notebook computers in 2012.

9. Windows Mobile (Windows Phone)

Windows Mobile is Microsoft's mobile operating system used in smartphones and mobile devices – with or without touchscreens. The Mobile OS is based on the Windows CE 5.2 kernel. In 2010 Microsoft announced a

new smartphone platform called Windows Phone 7.

Did You Know...? According to data from the International Data Corporation (IDC), the worldwide smartphone market grew 1.1 percent year over year in 2016. Android dominated the market with 86.8% share in 2016Q3, followed by iOS at 12.5%, and Windows phone at 0.3%.

Image Source: Smartphone Mobile OS Market Share, 2016 Q3 (IDC)

Based in Nova Scotia, Canada, Vangie Beal is a freelance writer, covering business and Internet technology for more than a decade. She is also managing editor of Webopedia.com.

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