

Evolution of Smartphones And Android Operating System

Evolution of Smartphones –

Background

First telephone call was made on March 10, 1876 by Alexander Graham Bell. After that Pager continues to dominate wireless communication early 1990's. From early 1960's to mid 1990's pager continues to evolve. However by mid 1990's, cellular technology became cheaper and more widely available, causing cellular to displace paging as a commercial product. Still pagers are used as niche low cost products in hospitals and retail sectors.

A mobile phone (Cell phone) is an instrument, which allows user to receive telephone over a radio link, using cellular network. A telephone call can transmit voice, data, text messaging, mms, email and short-range wireless communication using Bluetooth, games, business applications and many more. A mobile phone, which delivers above said capabilities and more are called as Smartphones.

First hand-held cell phone was demonstrated by John Mitchell and Martin Cooper on Motorola in 1973 weighting 1 Kg, it took 10 years for first commercial cell phone. Today 87% world population owns a cell phone, with Smartphone usage increasing every day.

Mobile Phone landscape has been evolved in last 2 decades. It is estimated more than billion Smartphone Users end of 2014. With World population 7 billion and 87% world owning cell phone, end of 2014 there will be approximately 1 smart phone in every 5 people in world.

What is Smartphone?

A Smartphone is advanced version of cell phone, which allows user to perform more advanced computing capabilities other than receiving and sending phone calls. Today 90% of Smartphone devices are driven by Google's Android and Apple's iOS mobile operating systems.

When did it started?

Concept of building telephone and computer were first conceptualized in 1973, but first commercial version of Smartphone was launched by Erissson in 1997. In early 1990's many users popularly used a dedicated PDA (Personal Digital assistant) device. As name suggests PDA's mainly used to manage appointment calendar, to-do list, address book, calculator. Most of PDA's has a touchscreen and memory card for data storage. PDA's have become mostly obsolete with widespread usage of Smartphones.

Many of Smartphones before Android, iOS and blackberry used to run on Symbian Operating System. Operating system is a collection of software that manages computer hardware and provides common service to front programs.

Japanese firm NTT Docomo was first company to achieve million subscribers in early 2001 in Japan; outside Japan it was still a rare feature. Blackberry based Smartphone's got lot of good responses in 2006, which were very popular in business people and young people. Post 2006 Nokia company launched N series, which was popular due to its entertainment-focused phones.

In 2007, world witness a drastic change in Smartphone when Apple Inc introduced one of the first phones to use 'multi-touch' interface named 'iPhone'. iPhone was the first phone used its large touch screen for direct input using fingers, instead of traditional keyboard or stylus which was common for Smartphone.

In 2008 Android released first phone (HTC Dream) also called was T-Mobile G1.

Since 2007/08 most of previous Smartphone market is captured by Android and iOS. With every day people are relying heavily on Mobile phones for daily routine. There is huge surge in mobile devices, providers and applications.

Android™ Operating System –



Android was founded in Palo Alto-California, in October 2003 by Andy Rubin, Rich Miner, Nick Sears and Chris White. Google acquired Android in 2005. After acquisition Rubin developed a mobile device platform powered by Linux kernel. Android is released by Google under open source licenses, which encourages majority of enthusiasts develop new features for advanced users.

Android launched its first commercial phone HTD Dream on October 22, 2008. Since 2008 Android has released various updates of operating systems, which include new features and bug fixes for previous releases. Each major release is named in alphabetical order after a dessert or sugary treat.

Version	Code Name	Release Date	API level
2.2	Froyo (Frozen Yogurt)	May 20, 2010	8
2.3 -	Gingerbread (food product with ginger and honey)	February 9, 2011	10
3.2	Honeycomb (honey stores)	July 15, 2011	13
4.0	Ice cream Sandwich	December 16, 2011	15
4.1	Jelly Bean	July 9, 2012	16
4.2	Jelly Bean	November 13,2012	17
4.3	Jelly Bean	July 24,2013	18
4.4	KitKat	October 31,2013	19

Various applications based of Android Operating System in Smartphone and outside

- Various software's to business purpose
 - Manage appointment calendar, to-do list, address book, calculator.
 - Manage and Edit presentations.
 - Video and Phone Conferencing over internet
 - Chat using popular Chat tools (WeChat, WhatsApp etc)
 - Manage your documents using Cloud technology
 - 3g and higher Internet browsing.
- Google Glasses
- Google TV
- Smart Watches
- High Definition games
- Android@home – Control your homes switches thermostats and power sockets from phone.
- Watch Live TV
- Emergency alert applications.
- Read books
- Fitness Applications
- Medical records and information
- Shopping through phone
- Railway / bus booking
- Airplane booking
- Check Weather and News
- Educational Tools

How can we download updates and Applications on Android Operating System?

Android OS comes with various Mobile Devices. Android OS and billions of apps are available on **Google Play store**.

What is next in Android Operating System?

Project Tango - Current Prototype is a 5" Android phone containing highly customized hardware and software designed to track the full 3-dimensional motion of the device as you hold it while simultaneously creating a map of the environment. These sensors allow the phone to make over a quarter million 3D measurements every second updating its position and orientation in real-time combining that data into a single 3D model of the space around you.

What next to expect from Smartphone Market?

- Foldable OLED Smartphone's.
- Solar powered Smartphone's.
- Battery, which can consume energy from radio, television, Wi-Fi.
- Dustproof and waterproof phones.
- Biosensors allowing users to monitor fitness real time.
- Faster Internet.
- Biometric Security – No more passwords, finger print scanning unlocks your phone.