Research Article Impact Factor: 0.621 ISSN: 2319-507X
Rupali Chikhale, IJPRET, 2014; Volume 2 (9): 748-754 IJPRET

INTERNATIONAL JOURNAL OF PURE AND APPLIED RESEARCH IN ENGINEERING AND TECHNOLOGY

A PATH FOR HORIZING YOUR INNOVATIVE WORK

MOBILE PLATFORMS AND EFFORTS TOWARDS OPEN STANDARDS

MS. RUPALI CHIKHALE[2]

G. H. Raisoni Institute of Information Technology, Nagpur.

Accepted Date: 27/02/2014 ; Published Date: 01/05/2014

Abstract: Mobile phones are the most common and effective communicative device to a software-intensive devices like PCs and almost every organization have focus on creating more innovative mobile operating platforms. The success of any platform entirely depends on its adaptability to the third-party apps and ultimately, it constructs the global market. In the recent years, since the launch of the Smartphone, it has proved itself to be an end-to-end mobile communication solution for the global mobile users. Now, with the introduction of the various Mobile operating systems, the major Smart phone companies are creating a monopoly of securing the information system. They drive the open standard users and mobile phone operators to receive custom content, which are not common carrier functions and are delivered to users as a closed set or exclusive set of information services.

Keywords: Risk Management, Project

Corresponding Author: MS. RUPALI CHIKHALE

Access Online On:

www.ijpret.com

How to Cite This Article:

Rupali Chikhale, IJPRET, 2014; Volume 2 (9): 748-754

PAPER-QR CODE

INTRODUCTION

Mobile phones are the most common and effective communicative device to a software-intensive devices like PCs and almost every manufacturer have stepped up to focus on creating more innovative mobile operating platforms. The conclusive success of a platform entirely depends on its adaptability to the third-party apps and ultimately, it constructs the global market. In the recent years, since the launch of the Smartphone, it has proved itself to be an end-to-end mobile communication solution for the global mobile users. Now, with the introduction of the various Mobile operating systems, the major Smart phone companies are creating a monopoly of securing the information system. They drive the open standard users and mobile phone operators to receive custom content, which are not common carrier functions and are delivered to users as a closed set or exclusive set of information.

Smartphone OS:

Mobile OS design has experienced evolution in three phases: from PC-based OS to an embedded OS to the current smartphone-oriented OS. The evolution process is driven by the technology advancements in hardware, software, and the internet.

The 'Smartphone market' has very specific requirements that make it different from the markets for

PCs and other mobile phones. Scaling down a PC-OS and to have communication capabilities within a small and basic OS, ends in various fundamental compromises. The characteristics that build smartphone markets is unique and calls for a comprehensively designed OS.

a. Smartphones are small & handy:

Today, you don't literally have to carry your laptop or sit the entire day facing your desktop computer to perform all the tasks that you need to do. You need not have a wired telephone to do international calls either. With the constant technological innovations, almost everything is made possible with the use of a single, handy smart phone.

Mobile phones are both small and, by definition, mobile. The mobile phone usage environment requires them to be able to have enough battery capacity to support long talk time without need to change them frequently. These expectations make considerable demand on power management. Also the devices need to be responsive in all situations, and cannot afford to go through a long boot sequence when it is turned on. In fact, the device should never be powered down completely since it needs to activate timed alarms or handle incoming calls. At the same time, a mobile phone must provide many hours of operation on a single charge or a set of

batteries. Meeting these contradictory requirements can only be done if the whole OS is designed for efficiency.

b. Products diversity

Smartphones have evolved from traditional cellular phones with main input via the keypad, to a candybar or tablet form factor phones, operated with a styli, larger screens and small keyboards. The changing input mechanisms and form factors sizably influence the intended primary use of mobile devices and hence, OS design.

c. Open platform

The platform has to be open enough to accommodate independent third party technology and should make ways to software vendors to develop third-party applications. So as to reduce the time-to-market, OS should provide the developers, the support of standards already available or which can be easily coded for making the platform more open to attract more developers.

d. Power Management

Power management has always been a key challenge to mobile OS designers and will be even more so moving forward. Power demands are increasing rapidly on mobile users as more power consumption applications are developed for mobile platforms.

So enhancements in OS like processor power management and device power management helps to consume minimal usage of battery.

e. Limited Memory

To fit into the limited amount of memory a smartphone have, the OS must be very compact to provide required rich set of functionalities.

Smartphones OS and market share

The most common smartphone operating systems are Google's Android, Apple's iOS, Microsoft's Windows Phone, Nokia's Symbian, RIM's BlackBerry OS, Palm OS, and Linux.

- **Apple iPhone OS**

Apple iPhone's development chain, from the beginning Xcode to the App store, is finely polished again and again. Undoutedly, Apple has created a PC-grade Operating system for a smart phone. So, Apple Iphone OS is considered by many experts as gold standard for a smart phone OS and which is forcing other smart market players to play down the costs to grab a decent market share. Of course, Microsoft's Windows mobile edition has the biggest chance to be a vital player. Microsoft's decision to design a mobile OS (Windows Mobile) aimed mostly at

immediate business which may be a purely good short-strategy, but it must design an OS like OS X and deliver it to a wider consumer market.

- **Google Android**

Google's Android is undoubtedly similar to the iPhone OS in almost every way. It has Accelerometer, Application store, OpenGL for graphics, GPS and more utilities similar to iPhone. Even though the first Android phone came with a keyboard, since the key press events are just like an Apple iPhone. Surprisingly, there are several differences like, when we talk about graphics and User-Interface, Apple's iPhone could lead with floating point values than Androids. The strongest differences could be in the developing language, since Google choose Java, a well-known language for most of the developers. So the programmers can easily programed an application with Eclipse and simulate the application running on the phone in another Java process. The Java-based tools are very cheap and sometimes it comes at no cost and it takes less time to develop an application to up and running.

- **Symbian OS**

Symbian OS is the operating system for more than 100 different models of phones. The operating system consists of the kernel and middleware components of the software stack. The upper layers are supplied by application platforms like S60, UIQ, and MOAP.

Even though the Symbian got the major share of the smartphone market, they were used mostly in lower-end phones with less memory attributes that will not offer a pure web-browsing experience, GPS utilities, OpenGL for graphics, or other handy applications, but luckily it installs and runs Java ME (Micro Edition) applications and plays the puppets in the market at a dramatically lower-price.

Symbian struggles sometimes to work with the challenges in developing for a sizably wide range of platform like it. There are several Symbian smartphones that costs several hundred dollars which shows video at 19fps.

- **BlackBerry**

Blackberry OS is the property of RIM (Research In Motion) and was first released in 1999. RIM has developed this operating system for its Blackberry line of smartphones. Blackberry is much different from other operating systems. The interface style as well as the smart phone design is also different having a trackball for moving on the menu and a QWERTY keyboard. Using the BlackBerry widget APIs, developers can, create seamless applications.

Like Apple, Blackberry OS is a close source OS and is not available for any other manufacturer. Currently the latest release of this operating system is Blackberry OS 7.1 which was introduced in May 2011 and is used in Blackberry Bold 9930. It is a very reliable OS and is immune to almost all the viruses.

Some of the smart phones operating on Blackberry OS are Blackberry Bold, Blackberry Curve, Blackberry Torch and Blackberry 8520.

- **Windows OS**

All of you will be familiar with Windows OS because it is used in computers all over the world. Windows OS has been also been used in mobile phones but normal mobile phone users find it a bit difficult to operate it but at the same time it was very popular among people who were used to it.

This was the case until Nokia and Microsoft joined hands to work together. The latest Windows release by Microsoft is known as Windows 7 which has gained immense popularity among all kind of users. With its colorful and user friendly interface it has given Windows OS a new life and is currently in demand all over the world. Another reason behind its success is that this latest OS is used in very powerful devices made by Nokia. The computer like look has totally vanished from the windows phones with the release of Windows 7. Samsung and HTC also released some Windows based phones but they could not much place in the market. Nokia Lumia series is completely windows based.

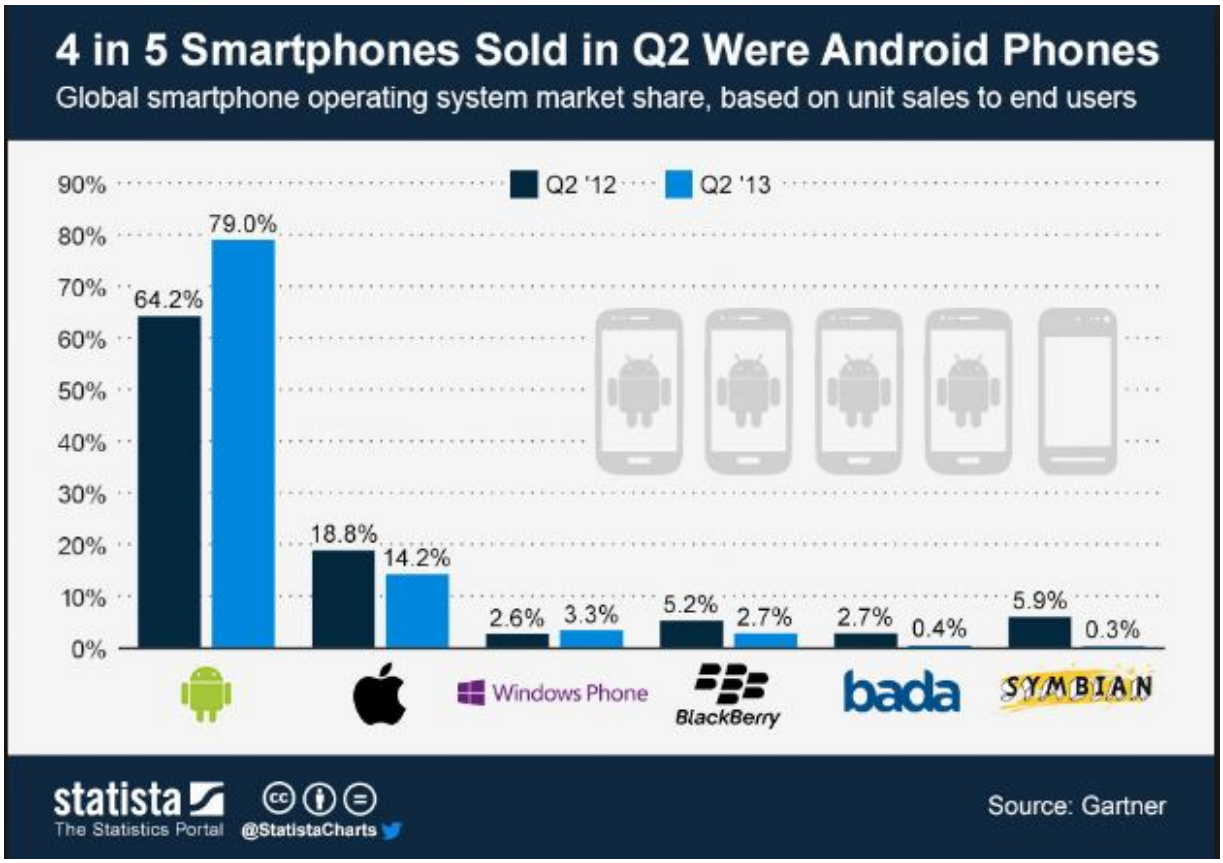
Palm OS

Palm OS was developed by Palm Inc in 1996 especially for PDAs (Personal Digital Assistance). Palm OS was basically designed to work on touch screen GUI. Some Years later it was upgraded and was able to support smart phones. Unfortunately it could not make a mark on the market and currently is not being used in any of the latest top devices.

It has been 5 and half years since we saw the latest update of palm OS in 2007. Palm OS was used by many companies including Lenovo, Legend Group, Janam, Kyocera and IBM.

Usually, Smartphone OS were designed to accommodate third-party applications and tools. Users require more facilities and to do more than making a phone call, play videos and do SMS. The introduction of Web-browsing featured the mini-browsers and more or less, the ongoing OS war will be based on delivering a full-featured online and multimedia environment. It's obvious that, Microsoft turns billions via its PC OS than its Windows Mobile division. The manufacturer who is capable of providing the better OS for smartphones could be the series market player than the PC Operating system vendors. The reason is a very obvious one, since

the chances for smart phone market boom which will transform them to a major medium online and offline specialized business services. And in the other way, one who delivers the best platform, gets a lion's share in the revenue throughout the life of the smartphone market. If we work out the numbers, then it is clear, why this Smartphone OS war is so important. From the other point of view, Users consider the smart phones as a pure and easier computing platform. While the computers needed an OS, SDKs, and other third-party ingredients to thrive in the market and smartphones are much easier.



CONCLUSION

Traditional mobile operating systems have conceptually remained almost unchanged like its forefather, the UNIX. Several experimental mobile operating systems from the research community have been based on alternative paradigms. The new operational environment needed for a new DNA of a Mobile Operating System is possible when targeted towards robust operating systems that are strong in system integrity, connectivity and enhanced power management. And the days are nearing to witness them.

REFERENCES

1. http://seekingalpha.com/article/1954921-google-biggest-winner-in-2014-smart-device-market-growth
2. Steve Babin, Developing Software for Symbian OS.
3. Michael J. Jipping, Smartphone Operating System Concepts with Symbian OS: A Tutorial Guide
4. http://www.dotcominfoway.com/attachments/268_White-paper-on-Mobile-OS-and-efforts-on-Open-standards.pdf