

A Novel Comparison between Apple iOS 8 VS Android 5.0 Lollipop for Best Features and Sustainability of the Modern World Mobile OS

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Abstract- Today in this modern computing world, mobile has become miniature in nature; but not to forget the power the small devices have. For the mobile devices to hold so much of power comes not just from the hardware the vendors provide but also from the software that runs on these hardware. This paper compares the good and the bad features of the recently released Apple iOS 8 and Android 5.0 Lollipop and finally tries to resolve the best amongst the two.

Keywords: Mobile OS, smartphones, Apple iOS 8, Android L, Lollipop

I. INTRODUCTION

Google I/O, in the month of June, 2014 Google code named Android Lollipop as Android L and the world thought Google would abandon its pudding and confectionery-based development naming system[1]. Like wise Apple's iOS 8 had its announcement dated in the same month of the year 2014 as its 8th major release of the iOS mobile operating system at the Apple company's WorldWide Developers Conference[2]. iOS 8 was released on September 17th, 2014. Both these mobile OSes are in a tug of war situation right from the Google Android inception in the year 2008. Currently Google's Android clearly a winner with respect to statistics of holding more than 50% of the smartphone market share even as in the year 2011. For every 10 smart phones purchased more than 5 phones are based on Android[3]. In fact for this surge from Android, the RIM has almost declined to a small percentage.

When it comes to the pros and con – both hold a plethora of great plus points in their respective territories. Lets derive the winner of the Mobile OS.

II. Background – The necessity of proper Mobile OSes.

An Operating system that runs on a mobile portable device is called a Mobile OS. Mobiles today can do most of the work given to a desktop and in many cases can perform better than our outdated desktops! Most of the mobile device hardware have exclusive power of performance. But what also counts is the Mobile OS that runs on these hardware.

Earlier to Android 5.0 Lollipop, the latest version of Android was 4.4 codenamed Android Kitkat. Android Kitkat is said to be one of the most famous releases prior to the 4.1 series called the Android Jellybean. While the Kitkat market share was around 25% in September 2014, Android Jellybean had around 54.2% share to its successor[4]

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Likewise in the Apple world the predecessor of iOS 8, the last 7.1.2 of iOS had been installed to almost 87% of active iOS devices running.

iOS 7 was the design speciality of Apple's SVP Sir Jonathan Ive.

Both the Mobile OSes could run on a multiple devices of varied hardware components. And many a times the Android OS had the capability to run on multi-vendor architecture.

III. FEATURE COMPARISON – THE BEST 5

Design – Material Design vs Flat Design

For Apple the hard work was done last year with iOS 7. Out went Steve Jobs' beloved skeuomorphism and in came minimalist flat design. It wasn't met with universal praise and it certainly became more cartoonish, but iOS 7 was clean, modern and established Apple's new design language. iOS 8 builds on this good work adding more consistency and refining iconography, but it also has some smart design tweaks with regards to notifications, widgets, multi-tasking and keyboard interaction which I'll go into in more detail in the Features section on the next page.

In addition to this iOS 8 makes better use of gestures for navigation: most notably a swipe from the left edge to go back and a double tap of the home button for 'Reachability' which slides the whole screen down. These are smart moves given the jump in screen size with both the iPhone 6 and, in particular, the iPhone 6 Plus.

By contrast Android 5.0 Lollipop represents the biggest redesign in Android history. Like iOS 7, it sees Google ditch almost all vestiges of skeuomorphism in favour of a flatter, more minimalist design. But unlike iOS, Material Design is more than respray. It is an ideology.



Fig 1: Flat design Vs Material design

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As the name suggests, Material Design is more about physicality than superficiality. It has specific physical rules about how buttons should react when touched, how different UI layers should interact and how animations are both trigger and unfold and this is being pushed on third party app developers as well.

Comparing the iOS 8 and Android 5.0 Lollipop is a shock, because for the first time in Android history it has become more design focused than iOS. The ugly duckling is finally a swan. Its design is both visual, instructional and altogether more ambitious.

Not everything is right out of the gate. If anything Material Design is overly white and spread out (you can see less information in most apps – eg fewer emails, lines of text, etc) whereas its predecessor Android 4.4 KitKat was too dark and dense.

IV. Expansion vs Refinement

Unfortunately while Google Android Lollipop concentrated on refinement of features in its OS it was Apple who concentrated on expansion of functionalities in their OS.

Lollipop is all about refining existing functionality where as iOS 8 took major steps forward. But any how both OSes are in the practice of ripping up the best parts, its not a bad thing anyhow from the user perspective.

Extra features were also added from both OS point of view.

For example iOS 8 now kills annoying pop-ups with more discrete notifications, it also supports Widgets both features already existing in Android.

iOS 8 also added extra third party tools support – a functionality that most of the Apple users were excited about. As an example adding the tool “*Swipe and Type*” as a free app in the iOS app store as shown in Fig 2.

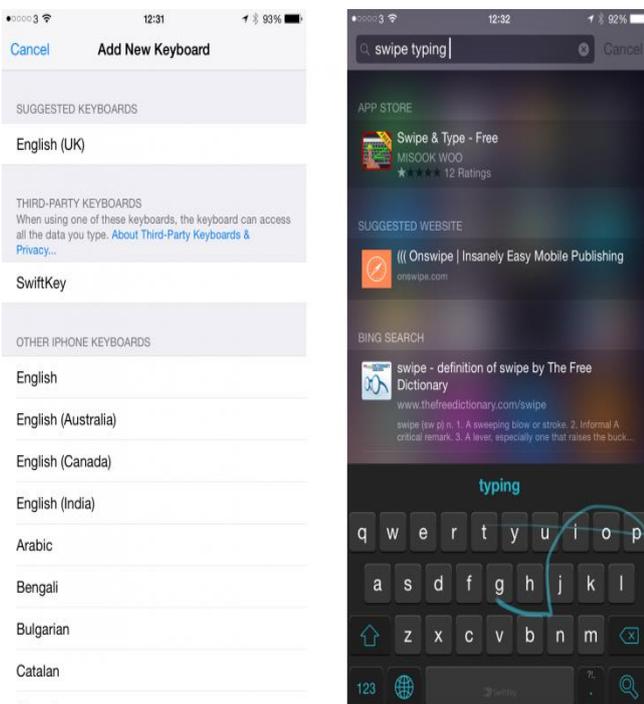


Fig 2: Third party tools support

Meantime in the Android Lollipop world, Notifications got a full time new look. Notifications with pull down shortcuts, expandable notifications with more quick shortcut commands are now a reality. Also the users of Lollipop can get notifications from every app from one place.

Lollipop has refined multi-tasking with the App switcher than its default launcher apps used in earlier versions. This means the user is no longer going just back to an app but to a specific thing within that app.

Considering the fact – the amount of wars between Apple and Android related to copyright issues, Lollipop is not quiet here. It has continued to copy the iOS Do not disturb mode functionality.

Project Volta

A common problem almost every Android phone user has is the problem of battery life. Now thanks to Project Volta – the early results are groundbreaking, with a hike of 36% battery life than Android Kitkat[6].

The same is not an issue in the iOS world. Thanks to the ergonomics concept followed by Apple. A screen size approximately to fit into the hands of a normal person and also to make sure a bigger battery size to provide the smaller screen size. Thus retaining battery life for a longer duration of time.

Security

The most interesting part of Lollipop is their approach towards security. Where Apple uses TouchID, Android now can perform handset unlocking through automatic facial recognition. The functionality of using the facial lock while the user can check lockscreen notification is a boon.

Multiple users and guest mode

This functionality not easily available in the iOS world, but in the Android – is more like using our mobiles like a desktop. Give all those required functions and give access to a user – who is a guest. Indeed a beautiful concept!

V. THE WORST 2 FEATURES COMPARISON BETWEEN LOLLIPOP AND IOS 8

Every new invention has its own disadvantages to advantages. Having conveyed the features as advantages lets discuss a few cons of both these OSes.

Material design Oversimplification

While material design is truly revolutionary in interface design, not all its choices will please everyone.

The most obvious reason is to clean up and simplify Android means that several options that once surfaced are now buried in menus[5].

An example being – gmail app which earlier could show upto 10 mails now would only surface around 6 or 7. Mainstream users would not care much about this, but power users have already expressed frustrations.

But some how thanks to flat design concept of iOS. This problem is resolved. iOS users are more than happy to stick on to the expansion got than refinement.

Biometrics

Android's automatic facial recognition is though advanced over Apple's TouchID functionality, it does not work in all places. For example Apple Touch ID is completely integrated with Apple Pay where as Google cannot propel to say that facial recognition works with Google Wallet.

Google needs to build fingerprint biometrics into the heart of Android as this will convince phone makers to then build it into their devices, rather than the erratic options like the fingerprint scanner on Samsung's Galaxy phones[5].

VI. CONCLUSION

There seems to be many things that both the Mobile OSes can boost of. Though having a plethora of functionalities is an advantage always, we could also make out that over advancement is many a times complex enough to create negativity amongst power users.

Though over the past few years Android seems to be leading in the market share, it all depends upon how Lollipop would emerge as a winner amongst various multi-vendor hardware distributors. Over complexity could be a mystery and all the good things done could go in vain.

On the other side after Apple's Steve Jobs complex design structures were kinda simplified by Sir Jonathan Ive – simplicity many a times seems to win over complexity. The market share of Android is huge in parts of Europe, UK, Asia, Asia Pacific – but trying to retain the number 1 OEM position in US for Android is not an easy task. Both Mobile OS have respective pros to con. It all now depends upon the individual to solve the mystery to make the OS win over the game of argument – who's the best! Its his adaptability to the new environments, easy of use of software over hardware over the price tag should be the one liner to decide the winner.

From our view point – Android is the clear winner when it comes to elegance and functionality of its OS onto latest hardware. Whereas Apple's iOS 8 would be the winner when it comes to simplicity of UI and user interaction.

Finally both would sustain this world as a Mobile OS for long for sure.

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