

UNDERSTANDING SMARTPHONES: SOME LESSER - KNOWN FACTS

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Understanding Smartphones

What is a Smartphone? To be precise, what is the first image that comes to our minds as soon as the word Smartphone is heard? For most of us, it is a highly advanced gadget which has almost become an integral part of our lives.

Further, a Smartphone is a small device, generally palm-sized which can do all the functions of a full-fledged advanced computer. The ease of usage that it gives to the users is beyond imagination. It may be always with you, regardless of the place and time. It is light in weight and remains active as long as the users want it to be. Today, with the technological advancements that Smartphones has shown, it would not be wrong to say that it is a convergent device, in the literal sense of the word. One can connect it with a printer wirelessly and can take prints. Also, when we talk about smartphones, some basic components are essentially present in the same. Some of them are as follows:

Camera: No smartphone is complete without a camera, which comes inbuilt in all the smartphones. These cameras eradicate the need of a digital camera. This is known as main camera of the phone and is situated at the back of the phone. At the front of the phone, there is one more camera available, known as front camera and popularly known as selfie camera.

Both these cameras are capable of capturing still and videos.

Screen: Today, almost all smartphones are equipped with big size screens, which dominate the entire device. Generally, smart phones are available with 4 inches to 6 inches screen size. Some smart phone screens are even bigger than this, like 6 inches to 6.4 inches and even more. But these smart phones are known as Phablets.

Sensor: Camera is the main sensor available in a smartphone. However, there are other sensors available like motion sensor, gyro sensor, proximity sensor etc. in the smart phones.

Things to Keep in Mind while Buying a Smartphone

Operating System (OS): Identify an operating system which is best suited for your needs. There are two mainly popular operating systems available in the market.

- (i) **Android:** Most of the smart phones like Samsung, Sony, LG, HTC and Motorola are using this platform. So, in this case if you're interested to buy a Samsung smart phone, then you have no option to choose except an android platform or operating system.
- (ii) **iOS:** This is an apple-based operating system and generally, Apple phones are costlier in comparison to the android-based smartphones.

Camera and Megapixel: Most of the companies offer their smart phones with higher megapixel count and it is considered that higher megapixel will result in higher quality of still and moving images. But, this assumption is not true. Companies charge higher price with cameras boasting higher megapixel count. Higher megapixel count of the camera only helps in taking big size printout of an image which is not usually the concern these days. We generally do not take printouts of our images. We store or post our images digitally.

In case of digital storage or posting, you do not need higher megapixel count and even a 4 or 5 megapixel camera would suffice the purpose. If you're posting higher megapixel images on WhatsApp or Facebook, they shrink your megapixel count first and then upload your images.

Higher megapixel count also unnecessarily consumes the smart phone's memory and even your hard drives. So, it is advisable not to get stuck in the trap of megapixel count. Instead, look for a good quality lens and better processor in the smart phone. You should not pay a higher price tag for a smart phone in the name of higher megapixel count. It does not make the quality of an image better in any manner.

Quality of the Screen: Most of the smart phones come equipped with good big screens. Companies claim many features of the screen while selling their smart phones. Some of the claims are in fact real but others are not.

Let us try to understand which features are useful and which features can be avoided. For example: high definition screen of the phone, full high-definition screen of a smart phone, 2K screen, 4K screen etc.

Please understand as most of the smart phones come equipped with 4 inches to 6 inches screen size, in this case telling which screen is high definition or full high-definition or 2K or 4K, is quite impossible. Please take my word, it is impossible to determine which screen is high-definition or full high-definition or 2K or 4K at 4 to 6" screen size. It can only be recognised if the size of the screen is much bigger like 50 inches to 75 inches. So, clearly, no question arises which is the go to screen in case of a smartphone. Instead of considering hi-definition or full high-definition or 2K, 4K etc., we should consider the brightness levels of the screen. It is then that the high-definition screen is more than sufficient for 4 inches to 6 inches screen size smart phone. Brightness levels of the screen are measured in NITS.

Also, we should consider the toughness of the screen rather than merely looking for HD/ FHD/2K/4K. The stronger the screen, the more durable it would be. Corning Gorilla screen glasses are considered the most tough smartphone screens in the market. A series of Corning Gorilla Glass is available in the market today. For example: Gorilla Glass-1, Gorilla Glass-2, Gorilla Glass-3, Gorilla Glass-4, Gorilla Glass-5 and the Gorilla Glass-6 has just been launched in the market, which is considered to be the most toughest smartphone screen glass available in this market till date.

Companies charge a premium amount in the name of full high-definition or 2K or 4K screens, so do not be fooled by these new and fancy terms. Keep your understanding clear. Go to screen which is brighter and tougher.

RAM: Normally, it is considered that a smart phone with a higher RAM will have a good processing speed, which is true in most of the cases. But sometimes, it is also true that a smart phone with 1GB RAM may outperform a Smartphone with 2GB and even 3GB RAM.

Now, how is that possible? It is very important to make it clear that RAM alone does not make the processing speed of a smart phone smoother and faster. Rather, it depends on other things too, like the size of the processor, the type of operating system you are using. For example: An iOS-based Apple phone with 1GBRAM may outperform the android-based micromax phone with 2GBRAM or even higher. So, I mean to say that we should not blindly follow specs given by the phone companies. Instead, we should experience the phone by using it physically for some time before purchasing the same and these facilities are available on most of the phone company outlets these days.

Processor: Bigger the processor size, better the performance of the smart phone would be. Generally people think that phone with more cores are better which is true, but not always. It is considered that a dual core smart phone would be better than a single core smart phone. A quad core smart phone would be better than a dual core smart phone. Likewise, an octa-core smart phone would be better than a quad core smart phone. But, it is not always true. It is true when these cores are supplemented and supported with big processor size. For example: a phone with 1.8 GHz quad core would be better than a smart phone with 1 GHz octa core. Why? It is so because the size of the processor in the first smart phone is bigger than in the second one. So, it is always better not to spend money on the number of cores available in a smart phone. Rather, we should look for the bigger and better processor size.

Battery and Build Quality: Battery plays a crucial role in a smart phone's performance. These days, most of the smart phones are coming with big screen size which consumes a lot of battery. Lots of applications running in the background of your smartphone also consume a significant amount of battery. The internet pack/connection always remains in active mode, consuming a lot of battery as a result.

Any function in a smart phone cannot be performed without a battery, thus, battery becomes an integral part of any smart phone. Rather, a big-size battery becomes an important component of any smart phone. Smart phones are sold by telling that this phone comes with 3000 mAh battery or 3300 mAh battery etc.

Recently, Samsung has launched its latest flagship smartphone Samsung Galaxy Note 9 on August 09, 2018 in America with 4000 mAh battery. And they are advertising it with 4000 mAh battery size as an achievement. So, smart phone with a good big size battery pack is always welcome.

One more thing I would like to add here is that only a big size battery is not always sufficient. But, the performance of the battery also depends on a few other factors like the kind of operating system the

phone is using like an iOS of Apple consumes less of battery than its android counterpart. It also depends on how you use your smart phone. If we watch high-resolution videos on our phone, then certainly the battery would run out fast.

For saving battery, set your video resolution on 360p or 480p which will still give you good quality video and at the same time save your battery. Keep your internet connection switched off and switch it on only when needed. This is how you would be able to save the battery of your smart phone. Keep your phone's screen brightness levels on low mode in order to save the battery. Also, stop all the background applications from your smart phone. When you buy your phone, look for a good big size battery plus operating system.

Some more tips to keep in mind while buying a smartphone

Be very clear and ensure how much internal storage you would need in a phone. It is so because higher the storage more would be the cost. So, spend judiciously. Choose the storage as per your requirements and do not go for higher storage if you actually do not need the same. It is just the storage and nothing more than that. By the way, storage does not make your smartphone better in any manner except the storage capacity itself.

Be very clear and ensure how much RAM you would need in your phone. People go for higher RAMs which is good, but it comes with a cost, so choose the RAM as per your requirements. First understand what RAM does in a smart phone. It enables the smooth functioning of a smart phone's. Apps run without any hassle. You can play heavy games lag free.

A 2GB or 3GB RAM would be able to do most of your tasks, unless you are editing 4K videos on your phones. For this, you would need higher RAMs like 6GB or even higher like 8 GB. The performance of RAM also depends on the kind of operating system you are using. Generally, Apple based iOS outperforms android based smartphone in most of the situations. So do not waste money unnecessarily on higher RAMs which you don't even require. If you want to do some heavy work like 4K video editing or want to play very intensive games on your smart phone, then only you should spend more money for higher RAM size.

Latest trends in the Smartphone market

Dual/Triple/Quad Camera Set Up: These days, most of the smart phones are coming in the market with dual/stereo lenses camera setup. Both the lenses have different focal lengths, thus enabling the smart phones to do optical zoom in.

How? One camera, for an instance comes with 50mm focal length and another camera comes with 100mm focal length. Now, the magnification of a 100mm lens would be two times higher than that of a 50mm lens. So, these lenses: One with 50mm focal length and other with 100mm focal length; this type of camera system in a smartphone would give you 2X magnification or zoom in capability. It means that your image is magnified optically by two times and there won't be any quality loss in the image. These types of smart phones are getting popular these days.

Some of the examples of dual cameras smart phones are iPhone 10 by Apple Samsung Galaxy note 9, Samsung Galaxy S9 plus, One Plus 6, Xiaomi Redmi Note 5 pro etc. Apart from the same, today, few smartphones are also available equipped with triple and even quad camera set up. Samsung Galaxy S10 and S10 Plus, Samsung Galaxy Note 10, Samsung Galaxy Note 10+, Huawei P30 Pro, LG V50 ThinQ, OnePlus 7 Pro, iPhone 11 pro, iPhone pro max etc. are some of the available phones.

Variable Aperture in the Smart Phone Cameras: It is becoming a latest trend and smart phones are coming equipped with variable apertures in the lenses of the smart phone cameras. What it does? It enables the smart phone to take a picture in low lighting conditions. How? It is so because aperture is the opening of the ring within the smartphone lens which allows the light to go into the smartphone lens. Bigger the aperture, more will be the light going in. Thus, making your smartphone capable to take pictures in the low lighting conditions.

Smaller the aperture, lesser will be the light going in, thus making your smartphone less capable to take picture in low lighting conditions. You need more light or daylight for shooting in such conditions. Most of the smart phones come with single camera setup and constant aperture value. But these days, some smart phones have been launched with dual camera set up and variable aperture capable of shooting in bright daylight as well as in very dim light conditions. The examples of such smart phones are Samsung Galaxy S9 plus and Samsung Galaxy Note 9 smart phone.

Stereo Speakers: Earlier, smart phones used to come with a mono speaker set up. These types of smart phones fire sound from the single side only. But these days, smart phones are coming equipped with dual/stereo speaker system which fire sound from both the end of the smart phone and gives you a very rich and immersive listening experience. Notable smart phones with good stereo speakers are Apple iPhone 7, Apple iPhone 7 plus, Apple iPhone 8, 8plus, Apple iPhone 10, Samsung galaxy S9 plus, Samsung galaxy S9. The other smartphones include Samsung galaxy Note 9, OnePlus 7 Pro, iPhone 11 pro, iPhone pro max etc.

Infinity Display: The whole front of the phone is display and nothing else except the speaker grill or earpiece at the top of the smartphone. These types of displays are popular among consumers today. Every new phone is coming with this type of display as video viewing and gaming on the smart phone is getting popular and bigger screen size enhances the viewing pleasure or viewing experience.

Notable smartphones with Infinity displays are as follows: Apple iPhone X, Samsung galaxy note 9, Samsung Galaxy note 8, Samsung Galaxy S9 plus, Samsung Galaxy S9, Samsung Galaxy S8 plus, Samsung galaxy S8, Samsung Galaxy S10, S10 Plus, and S10e, Xiaomi Redmi note 5 pro, One Plus 6, OnePlus 7 Pro etc.

Conclusion:

Over the period of time, smartphone has very seamlessly paved way in every nook and corner of our lives. Regardless of our age, occupation, family background, language etc.; smartphones are being used by a significant majority in India today. However, the way one uses the same is personalized by us as the users on the basis of our needs, whims and fancies.

It would not be wrong to say that today, when we enlist our necessities, smartphones cannot be left behind, though it is possible that the same is enlisted subconsciously. Communication, and most importantly telecommunication has witnessed a revolution post the advent of smartphones in the market. Each one of us is reachable and accessible 24*7, certainly by the virtue of our sleek smartphones. However, at the same time, it cannot be negated that it has both pros and cons. But, ultimately, what doesn't have pros and cons.

There has been immense debates and discussion about the negatives of the smartphones. But, despite the same, the positives of the same cannot be overlooked. The growth, acceptance and reach that smartphone has shown in such a short span of its existence is quite a benchmark in itself. Still, there is a long way to go and it can be very easily stated that smartphones even today have immense potential, which is yet to be tapped.

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