

EPC



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Suberqah

SmartPhone

Vol.10 No.1



Editorial's Talk



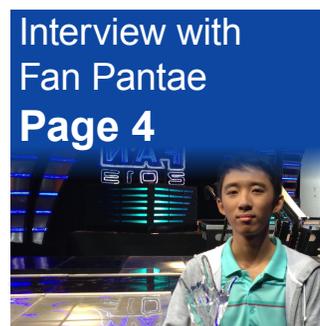
Kittituch Nilanan
KMUTT

Welcome to Cyber Ant in the theme of “smartphones”. This issue contains whole technology articles, especially smart phones, Please prepare for technologies strike in your hands!

Look around, please count how many people who have smart phones around here. Almost everyone have them right? This is the reason that's why we chosen this theme.

You can do almost everything by smartphones, Such as order pizza when you are hungry, call a police when you are on emergency situation, or check for news, you can open a map and many things. Did you see?

But I am sure you do not know something about smartphones, me neither. This magazine will tell you some of mysterious about smartphones that you need to know. Enjoy!



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Smart phone



Titsanu Wantaratorn
Non

Despite of the title, this magazine is not an advertisement about smart phones and yes, we are not going to describe properties of each smartphone either. You may think that we've chosen this topic because it suits Computer Engineers. Well... actually it is but that is not the only reason! Why we have chosen this topic is going to be explained below.

Actually, we have chosen this topic is because we think it is cool! Smart phones are everywhere even when you are reading this you may be holding your smartphone in your hands, charging it beside you or both charging your smartphone while holding it in your hand. As you can see, these days smartphones are one of your life's factor. Almost everyone has smartphone, using it all the time. There must be at least one of your friend who always takes the photo of his or her food before digs in, or it may be you who are doing it!

From the word "smartphone", if you translate it literally, it means the phone that is smart which is now able to do most things your PC or other gadgets can do. Think about what smartphone can do. You can copy your friend's lecture without taking the original with you, use a calculator on your smartphone, etc.. But technologies changes as time passes by. Just think about the future,



smartphones may be able to transform into robots, transform from a regular phone to a touchable holographic or maybe you can use your phone as an chopping block with the chopping block app!

Joke aside, you can even interpret the word "Smartphone" as an advice "Using the phone smartly". Many people are victims of using smartphone carelessly. Some loses a large amount of money from buying items from games. Some uses it too much that it cause harmful effect on their health while many people made a fortune out of it from doing business and taking advantage of the smartphone's market. You can spend some time playing games to relax but addicted to it could burn most of your free time quickly. So use your smartphone smartly.



And that is, the reason why "smartphone" is cool! But why does it concern the CPE? Obviously, it is an electronic and programmable device so it must be programmed to be able to be any uses and programming is one of our specialties! If you are interested in this and you are not yet our member, then join and become one of us, Computer Engineering Department and enter the world of new technology, new way of thinking and many other things you may have never seen before!!!

Photograph : top, <http://goo.gl/LwxfRe>; middle : <http://goo.gl/EF8nnN>; Bottom, <http://goo.gl/nDs0xd>



☰ NFC



Sirapop Wongstapornpat
Fluke



Hello readers! Since the main theme of this magazine is smartphone, so we are going to talk about some technologies on smartphones here. When you are thinking about smartphone, what come across your mind? Some may think of apps, some touch screen technologies, and many more. However we are going to talk about something which might not be so recognized, that is the NFC.

What is NFC?

NFC stands for Near-Field Communication. This is, as the name implies, the technologies about wireless short range communication. NFC has been integrated into smartphone's features for many years. The first well-known smartphone to include NFC was Samsung Nexus S released in 2010. Other smartphones starting to include NFC technologies since then, and its importance along with its usages have grown up fast.

How does it works?

It all starts with electricity and magnetism. When electrons flow through a conductor, the magnetic field will be created around. When the magnetic field is around a conductor, it can cause electrons to flow. This depends on many variables, one of them is the distance between, but this can easily make you understands the concept that NFC was built upon. Smartphone may uses its power to cause electricity to flows into NFC chip within, causing a weak magnetic field. If you move your phone near another NFC chip, this field cause electricity to flows in that chip and generate the responding magnetic field. Your phone will then detect this and decode signals into contents.

What is its usages?

NFC can be implemented into many uses. The most widely uses now probably is the contact-less payment system. You finished your shopping, walk to the cashier, pull your phone out and hold it near the receiver. Put in some identifying pin code and it is done. Your payment is registered into your credit card, no physical cards need, no bill signing. Several companies has supported this kind of payment by launching services. Google wallet and, the most recent joiner, Apple pay, are amongst the list. It is not ending here, though, since NFC can also be used to pull more information from advertising poster, perhaps some video and links to websites. It can be used to unlock the door with NFC tag, thus eliminating the need of physical keys. The possibilities go on, limiting to only the limit of the technologies, which is still developing.

Problems and impacts

NFC is not immune to eavesdropping. Even as the communication process requires the NFC pairing be very close to each other in order to operate, someone with right equipment and antenna can read the exchanging information from even metres away. However, the service providers have encryption to protect user's data from unauthorised access. Since NFC involves much on some sensitive information such as financial and security keys, service providers have to make sure their encryption works. Anyway, the risks will always be there to considered.

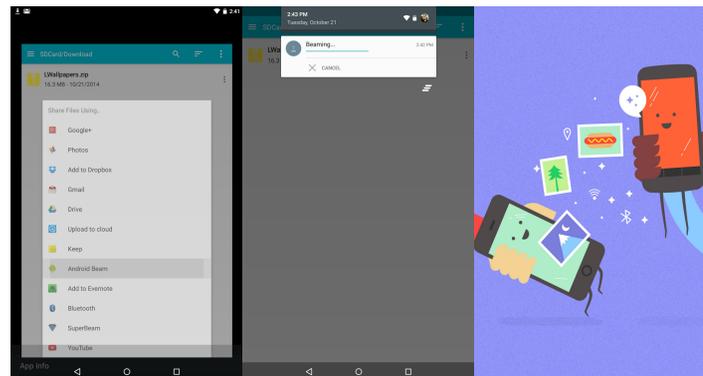
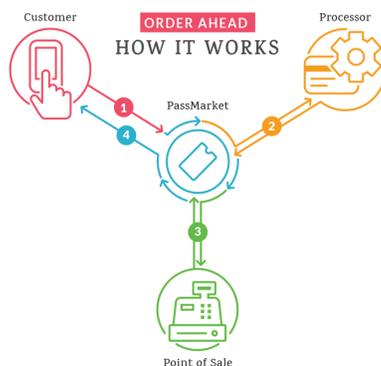
In the other hand, NFC has the potential to become a huge impact on our daily life. We all sometimes face the problem about having too many things to keep in the pocket. With NFC, we might as well never have to bother having a pocket again. Payments, coupons, tickets and even keys can be handled right from your smartphone, which most of us seem to carry to everywhere anyway.



Photograph: <http://www.betterthinking.co.uk/nfc-tags/>

PASSMARKET™
Apple Pay Enabled
Mobile Ordering

- Mobile Order Placed**
Customer places an order using their PassMarket™ Mobile Storefront application. They are the total using Apple Pay. The payment is sent securely to PassMarket™.
- Payment Authorized**
PassMarket™ sends the payment to the appropriate payment provider for the merchant.
- Order Received**
Upon successful payment processing, PassMarket™ then routes the order to the merchant's POS system to alert the merchant that a customer is on their way!
- Receipt Delivered**
The customer receives an update on their phone that payment was successful and the order has been received by the merchant.



Example of using NFC : Apple Pay™

Apple Pay is a mobile payment and digital wallet service by Apple Inc. that lets users make payments using the iPhone, Apple Watch-compatible devices, iPad and will work with Visa's PayWave, MasterCard's PayPass, and American Express's ExpressPay terminals.
Credit : <http://blog.imobile3.com/>

Example of using NFC : Android Beam™

Android Beam is a feature of the Android mobile operating system to allow data to be transferred via NFC. It allows the rapid short-range exchange of web bookmarks, contact info, directions, YouTube videos, and other data. Android Beam was introduced in Android version 4.0 (Ice Cream Sandwich).
Credit : <http://www.androidpolice.com/>

≡ Interview with Fanpantae “Smartphone” — Teerapat Taechaiya



Rachasak Ragkamnerd
Big

Varattaya
Rojanarachneekorn
Yung



Intouch Sinpoonpak
Pause



Q: What makes smartphone necessary?

A: More than important, just look around who doesn't have smartphone? Think about it, if you don't have a smartphone. How can you contact your friends? I just sent my smartphone to repairing center and look!! What I lost?! No meeting reminders, no contacts, no notifications, no reminders for homeworks. It's definitely Stone Age.

Q: Look back at 4-5 years ago. Why wasn't smartphone popular like today?

A: Actually, smartphones have been invented for a long time but people didn't give attention to, due to its high price and difficulty to use.

Q: When did you become interested in Smartphone?

A: I'm not sure. Maybe when I was in primary school. I didn't own it, but I see people used. Then I completely fall in love with it.

Q: What is the first smartphone that you used?

A: Nokia N95. Symbian OS v. 9.2.

Q: What do you think about privacy in smartphone?

A: iOS, Android and Windows Phone have features to secure and protect the user

contents.

For example, iOS will ask a user for a permission when application try to access the devices' hardware or user-sensitive information.

Android also has a permission system too. The system will ask for all permissions since the application installation process. User must allow first.

Windows Phone is contrast. It doesn't have an obvious permission settings, but it designed to be secure from the ground up. They limit the application's ability to access the user contents, forcing app to use the system provided methods only. This can control the user privacy, but could come with more limitations.

All 3 major platforms have the same goal to protect the users' privacy, but done in the different way. So user doesn't need to worry much about this.

Q: Do you think that they'll have central language that developer can develop with it and apply in every smartphone OS. ?

A: It's very hard to be possible. It sounds good only in theory, but not work in real-life. Every platform will have it own special features or APIs that one programming language can't rule them all.

In the past, some languages to do this. For example, Java with the concept “write once

run anywhere". They try to facilitate developers, but it can't do well. It has a performance and UI issues, because it is not native. Security problems and a lot of bugs because they need to support many operating systems. The result, developers choose to use specific languages designed for that platform.

I think web technologies (such as HTML, CSS, JavaScript) are the only things that nearly meet this concept. They are the truly central languages that can run in all platforms. It always be alternative languages for developing applications in many operating systems, even it have many limitations.

Q: Do you think that iPhone is one of the factor that makes people start buying smartphone?

A: Yes, a lot! In 2007, when the iPhone launched. It comes with many innovations and breakthrough multi-touch screen. It change the way how people use smartphone. No more 4 directional buttons, no more stylus. Just use your fingers. The operational gestures are very natural, just swipe. It is easy to use and human friendly. This is one factor that make smartphone accessible for every people, not just only tech experts.

iPhone also inspired many smartphones to use the same technologies. It sets a new standard, but you can't give all of the credits to Apple. They just only invented.



Q: What do you think about iPhone at that time? The first iPhone?

A: It's a good phone! I hadn't touched something like that before. The touch screen is smooth, fluid and responsive. However, at that time iPhone still had many flaws. It couldn't send MMS, record a video or install any application.

Q: How about smartphone trend in 2015?

A: Big screen, thin design. 64-bit processor and Quad HD display will become mainstream. Front camera will be improved a lot for selfie. 4G LTE will be a minimum requirement, even a low-end smartphone. Advance features such as biometric sensor, wireless charging will become a standard. More cloud connected. Overall price will be cheaper.

Q: Today, smartphone have a lot of screen sizes. What is a standard size in your opinion?

A: About 4-5 inches.

Q: How much influence of smartphone in Thailand?

A: Very much. It's an important part of Thai people's life. Today, you can see a variety of smartphones from many people in public places. This can indicate the popularity of smartphone in this country.

In Thailand, smartphone used for communication, entertainment, production and much more because of its versatility. It also influences in many industries.

Q: When will smartphone reach saturation point?

A: When everyone have their own smartphone....I guess.

Q: Maybe iPhone 30 will look like the laser blade?

A: Yeah! I wanna see that too!



AppDose for iOS: The Best of Basics



Natchanon Ninyawee
Ben

“A tablet is only as good as what you can do with it, and thanks to the hundreds of thousands of apps for the iPad Air, you can do more with it than any other tablet.”
— Dan Seifert, The Verge

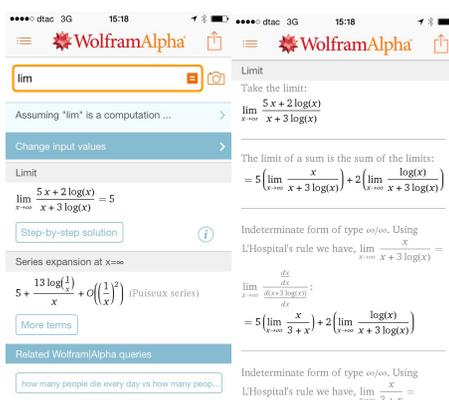
This is from the last Apple announcement which released iPad Air 2. I have no purpose to advertise the iPad but to point out how apps mean to the smart devices. Smartphone does smart-things because of smart apps. This issue, AppDose will present you the four legendary apps. Those are well-developed and also have amazing unique features. Let's see how great they are.

WolframAlpha «My second math TEACHA-!»

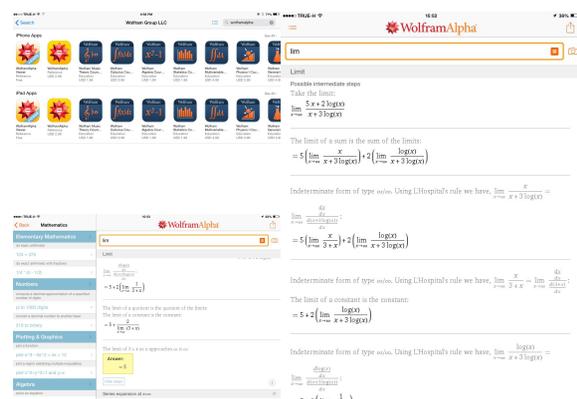
You might know that WolframAlpha is the great app, but you probably don't know it could teach you solving calculus step by step. That makes I always wonder that why WolframAlpha, a computer program could teach me math more understand than my teacher sometimes. «555 kreen face»



Splash screen of WolframAlpha® in iPhone



step by step Show you how to get to the answer when you enter math equations. Step by step instruct so clear.



WolframAlpha® was also in iPad!

Dictionary Universal «Like the name title ~universal~»

Dictionary Universal let you install your preferred dictionary databases. it's an app that have the same concept as the PC program named GoldenDict. And it makes searching definitions more easily and more efficiently.

Its wonderful features

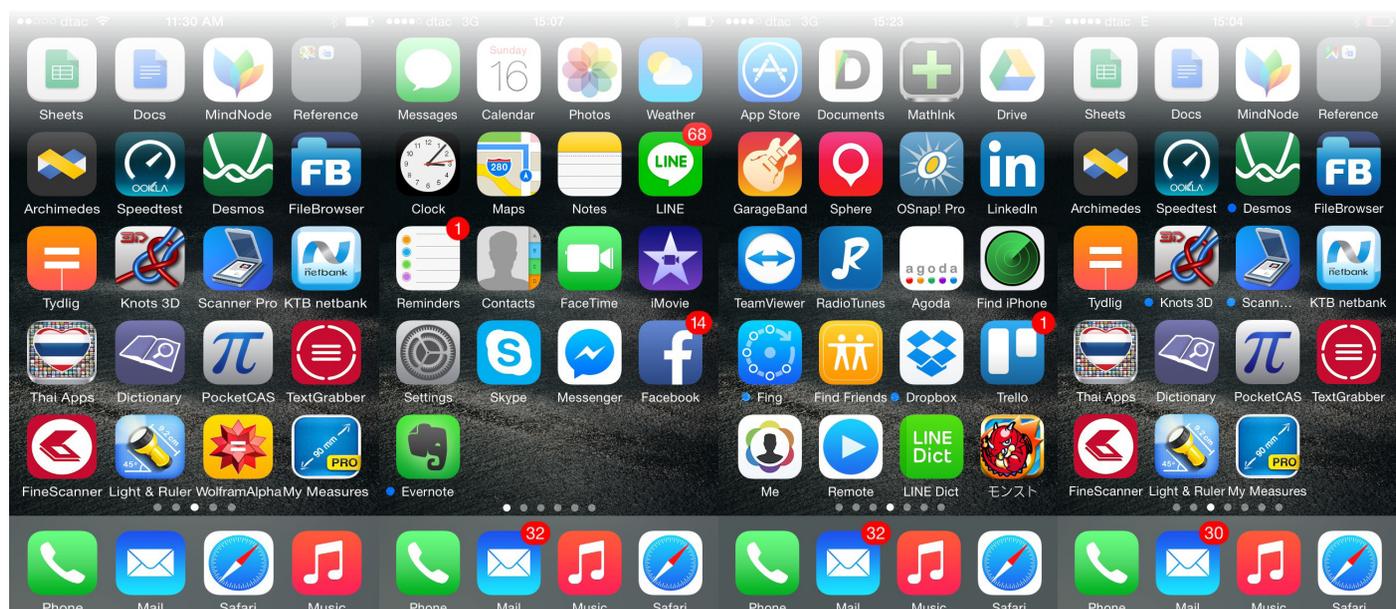
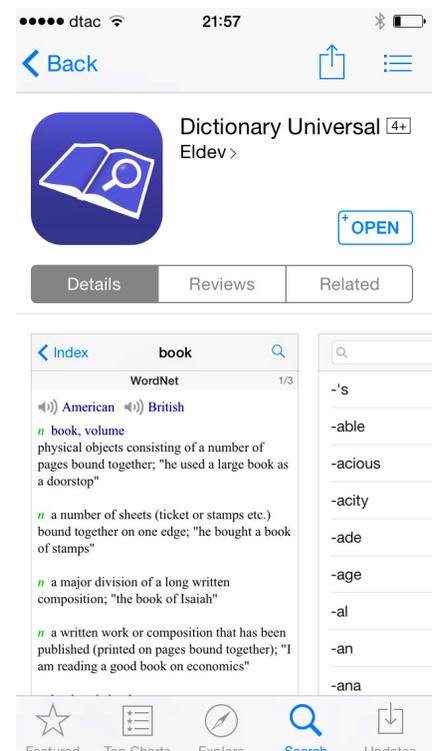
- You could install wide range of dictionaries
- We can use it when the phone are not connected to the internet
- All words are indexed for searching, so when you search you get the suggestion
- instantly
- fuzzy search, the ability to search to typed word that is missed spelling.
- Translating the word is in the clipboard.
- the interaction with this app is very good. it's well designed for the translators

However, you need to install dictionary database in the first time. These are my resources for Thai Dictionaries in many languages.

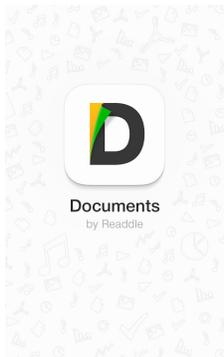
- Thai Chinese
- Thai Korean
- Thai Thai
- Thai French
- Thai English
- Thai Russian
- Thai Bali (ภาษาบาลี)
- Thai German

And many specific dictionaries

And many specific dictionaries are available to you at.
<https://sites.google.com/site/thaidictproject/>



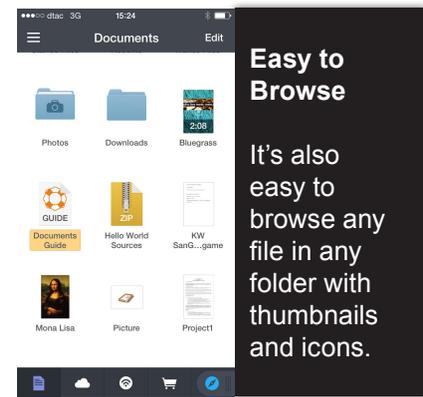
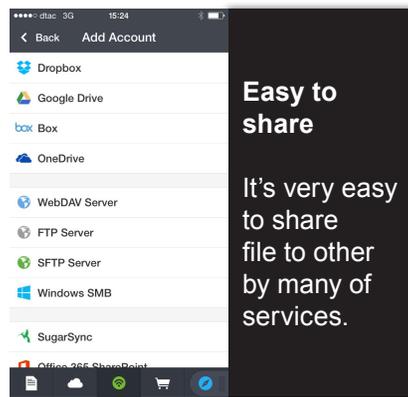
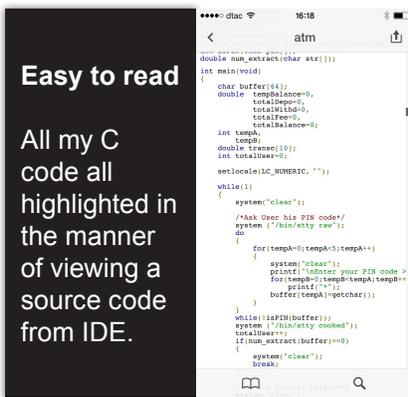
Documents by Readdle “View every files no matters what types they are”



Documents by Readdle “View every files no matters what types they are”

After you got this app. Not only There will be no more problems of opening files but also it makes me surprise with tons of hidden features.

It’s capable of handling the compression file like rar zip. we can view the variety types of source code using this app. Major Cloud services can be accessible without any problems. Simply, as you use it, you will fall in love with it more and more.



Calendar << The common disregarding app >>

NOV	18 Tuesday	19 Wednesday	20 Thursday	21 Friday	22 Saturday
all-day					
09:00	MTH101 Calculus 1 CB2505	CPE111 Computer Exploration CPE1114	GEN101 Basketball GYM	LNG211 CB1205	
10:00					
11:00	CPE100 Computers Solve Problems CPE1114				
12:00					
13:00					

Yes, it is “Calendar”. The one that comes with every smartphone at the first. As I see 20% of my classmates use it. It is very gorgeously useful and powerful in the mean of cooperation with team. With Calendar, we can organize the messy activities such as class schedule, extra class/tutorial or campus activities efficiently.

Moreover, we can share this with friend so easily because everyone has the same calendar no matter of what OS it on. e.g. I shared the same calendar of class with my classmate “Lucy”. Lucy not even know how to create an event on calendar; she is not a geek at techno-things, but she enjoy the sake of using it. Lucy and I know when and where the class start because of notification of the smartphone. She knows also she has free time on what time on what day. One day, our math teacher invite us to tutorial class. Again, this calendar just automatic be synchronised. Doing a project, tutoring for calculus, doing senior activities and having a dinner with her are examples of event. Then, I end up with her. We love each other. Without calendar, those moments between us would not existed. Calendar is not just a calendar. Do not underestimate this app!

☰ SOTUS in university? 🔍 ⋮

Poonyawat Woottisart
Pepper



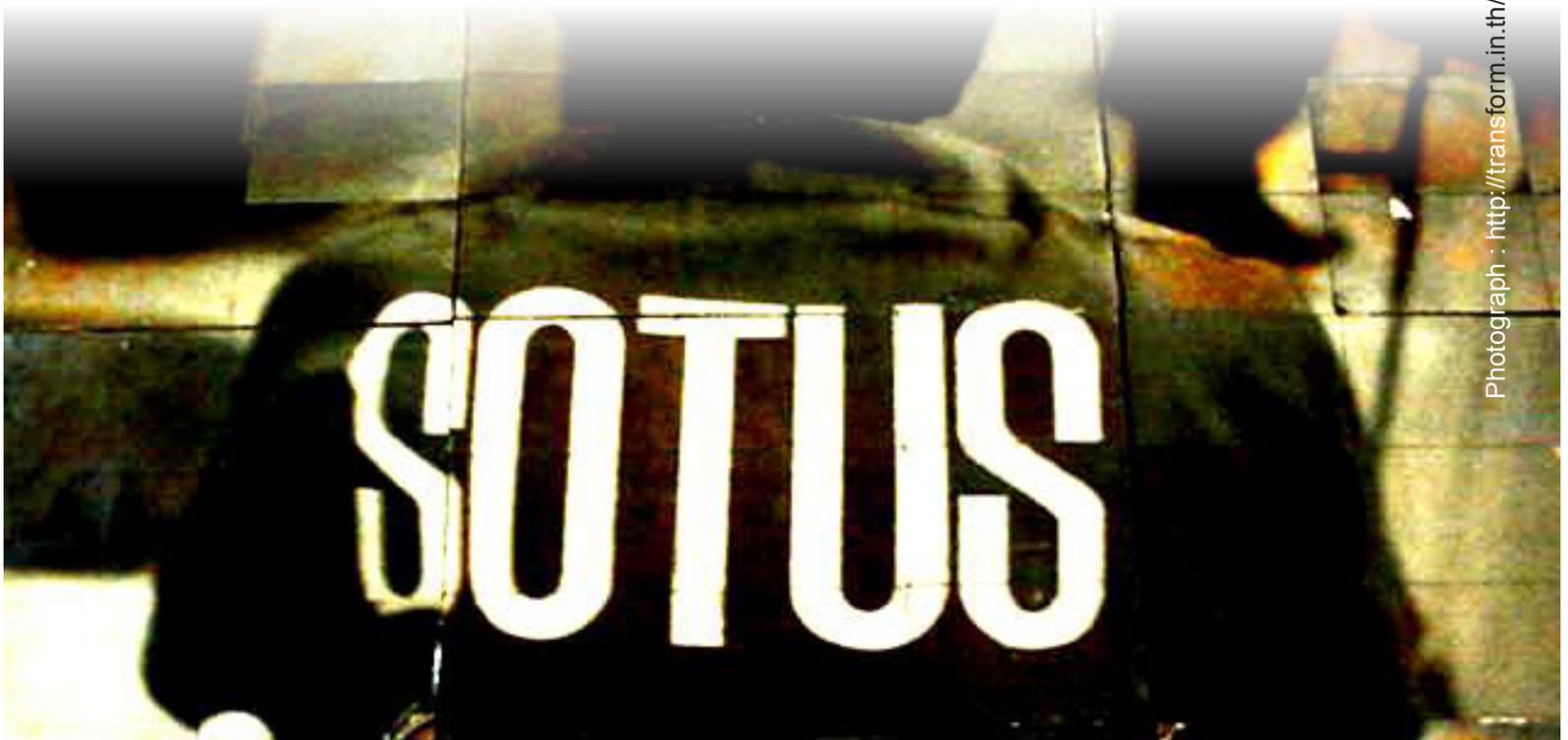
What's SOTUS stands for Is it the way to improve freshies better? Is it the tradition that should be continued?

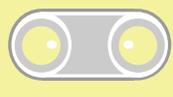
For each person, the meaning of SOTUS might be different depending on the impression that each person experiences. In my sole opinion, SOTUS is a system that supports freshies to do activities together so it might be good idea to keep some activities on but some should be put on a separate sentence.

Some universities may have wrong ways of SOTUS. In that case, it cause a lot of problems. Some problem quite often has been illustrated to show SOTUS is not always a good way to train freshies for life skills or mentality improvement. Because in those activities seniors may force freshies to do illogical or silly things. This reason is one of the causes many freshies hate SOTUS.

On the other hand, if seniors set the activities in a good way, it will not cause any problems and it will make good impression between seniors and freshies. So, such activities inprove relationships between peers and make them living together in harmony.

Finally, we think SOTUS like all methods is not always the solely best method for humanity improvement. We should choose some good points to improve any skills that use in university or daily life. And we think many SOTUS activities cause freshies mentality breaking down. So in this point, it should be changed or removed





FPC | 9 m. | pixels

A stylized icon of a camera lens, showing concentric circles representing the lens elements and a white shutter-like shape in the center.