Hello Everyone Sirawit Sukwattanavit I’m Pop, from Computer Engineering KMTIL

And today I’m gonna talk about the story of GPS

At first, How it come from right? It’s the technology that come from the military in USA, They invent this GPS use for their military stragdigies like send the missile or send the army into the battlefield , so they will know where are they, so they can’t be lost in the battlefield

And they use for that kind of benefit so long until the tragedy of the plane crash… because this plane was lost in the way in Russia and enter the restrict area so they shot the plane down and many innocent people died here,

USA see that isn’t good to keep this Technology alone, so they spread it out and expand their technology to world wide so everyone can use it

After that many business in USA and economy tend to be good and increased productivity

And today I’m gonna about how GPS work?

I will say that we gonna play a game to know how GPS work

Ok at first , We have a map right? We gonna know where are we in this map? And the rule is you can ask anyone around you and they till tell only 2 things…

1.where are they.

2. how far are they to us.

And your mission is you need to find where are we now in this map?

So we begin with we are here somewhere in this screen and you don’t know?... But You want to know where are we now so … we ask first friend … he tell you that He is here and far from you about 7 kilo. you will know already that friend stand at there. And you know you far from them around 7 meters and you count your step and draw circle around friend… You don’t know where are you now but you know that you are here somewhere around this circle line…

And you ask second friend your friend tell you that he here… and how far he is from you… so we draw a circle and already know that this 2 point of the intersection of the circle are the location that you will stand at somewhere around this because this 2 point is far from the distance that the first friend and the second friend tell you. And one last step we need ask one another friend… so we know now that where are we? Because the intersection of 3 line of circles is where you are standing

This is call trilateration or use 3 object to located where are we now?

And 3 friends that I’m telling you … those are satellites so…. If you want your GPS to work properly you need to use 3 satellites at the time to located your location.

And you know you, your planet is in 3 dimention not 2 dimention like we draw a minute ago… so this will be very complex to use in real life but the concept is the same

So as the simulation that we show to you we need to use at least 3 sattlight to located where are we.

But the limitation of the satellites, suppose that the earth is here and the satellites is here. It will see only a partial some space of the earth so, it’s need to have many satellites to cover all earth surfaces

So that mean we need to have many many more satellites to locate the people around the world. Nowadays the system of satellites have about 30 satellites around the earth to make sure that they can track your location and communicate between 3 satellites around the world

And that it for today thank you for your listening…