

The killer service for the 5G network.

Kwangil Jung(darrell.jung@miliwave.co.kr)

Miliwave - Korea 60G Wigig company

Abstract

When the new mobile generation is opened, the new mobile generation changed our human life a lot. Before first mobile phone is released with the name of mobile phone, we didn't know all people use the mobile phone personally. Each 2G, 3G and 4G make lead us to another new life style. Now 5G service is opened in Korea now. How do you think the 5G lead us what kind of the new life style and what is so called the killer application for 5G? It is not only depend on the 5G technology but also it will depend on the society changing too. Some super genius guy will change our life on 5G network like our history but we can expect something in our knowledge of 5G technology. Again, the question is what is the killer application.

Someone is saying about autonomous driving and some other is saying about the virtual experience like AR/VR called as immersive life. Ultra fast , ultra low latency, ultra connection can make many new application our human society never tried before. But still ultra fast , ultra low latency, ultra connection can be only symbol, not real proven word for the real technologies. The telecommunication technology has the limitation with technology like semiconductor, AI or video display technology. For example VR/AR technology is depended on the video display technology and the autonomous technology is depended on the AI technology. That is the reason why there are many argument on it. At any how the 5G telecommunication technology will stimulate the other very cutting edge technology and make it accelerate the developing the other technologies.

Currently many persons is talking that VR/AR is not making good progress and losing the business but AI and autonomous car business is getting bigger and bigger. Definitely 5G network will change the new business with AI and autonomous car technology. But the cost will be very expensive for using the 5G network in everywhere, then it can not be used at any time. The reason we are using internet on smart phone is that we can use the internet for free in home and office using WiFi.

Do you have any expectation for the WiFi on 5G era. That is the 60Hz WiGig solution. The speed is perfectly matching with 5G network and it is non-license frequency so it is free with your broadband wired network. What is big difference with WiFi and mobile network? That is hand over limitation. People will use 5G WiFi solution named as WiGig more than real 5G. That is the reason why I am saying that VR/AR solution can be used more than autonomous car solution with 5G network. 5G network will make wired network fast and it can stimulate the VR/AR technology and finally it can match with the customer's expectation.

Some can say that the VR technology has so many limitation on display technology. It is true but the display technology can be accelerated with the 5G network a lot.

The cost for the network is not mentioned a lot since the network provider is not thinking about the customer's burden. Even if that is the B2B business like smart factory, hospital, they can buy the WiFi network with very cheap cost compared with 5G network. Even in home, it will be same.

To reduce latency, MEC(Mobile Edge Computing) is the another big solution compared with cloud server. But that is still another cost for the customer but also content provider too. It can provided with same service with on premise solution so AWS,Azure and Google Cloud is focusing on on premise solution too. Which will have a effective cost for the service and which will be matched with wireless solution?

The mobile phone changed our life a lot very personally. It will lead us again to some place we never expected. The technology is not depended on the customer's choice or cost for the technology. It will be depended on the genius developer who has a other technology and can integrate good killer application which can be matched with this 5G network.

Keywords: *Wigig, 60GHz, 5G, Smart Factory*

Biography

- Samsung Electronics Network Division.

- LG Electronics Mobile Division.
- Summit Wireless Korea - WiFi audio solution in US.
- DeNA - No1 Mobile social game platform in Japan.
- BiSDN - Software Defined Network company in Germany.