



Haydn Shaughnessy, Contributor
I write about enterprise innovation.

TECH | 5/17/2013 @ 9:17AM | 74,046 views

Who Should Be Scared Of Samsung's 1Gb+ Wireless Technology?

Samsung came a long way in a short space of time. Earlier this week [they announced](#) Gigabit data transmission at very high frequency – in effect a 5G wireless performance level – a decade ahead of 5G being implemented.

It is interesting for a number of reasons, not least who it threatens. I think the technology itself is less relevant than what it says about how innovation is evolving, and the incredible pace.

More of that later. For now, what does it say about 5G, the next generation of mobile, and fiber optic cable, because one reaction to the news was that cable is dead.

The first thing it says is that Samsung is striving to be a leading player in telecommunications infrastructure – as yet they are not in the Top 5. The second is they just sent out an early warning signal of its intent in 5G. But the third point to bear in mind is that the very beginnings of 5G deployment are at least 8 years away and will be guided by standards as well as by invention.

That means a lot of negotiation with competitors.

One take on the announcement though is that wireless could displace fixed line, and is a threat to cable companies that have been slow to upgrade their networks. It also seems to overshadow Google's announcement of a 1GB fiber network in the USA.

In fact its impact on Google is different. Its impact on Apple, [cited here](#), is different again.

But first here is the announcement.



Samsung E370 (Photo credit: Wikipedia)

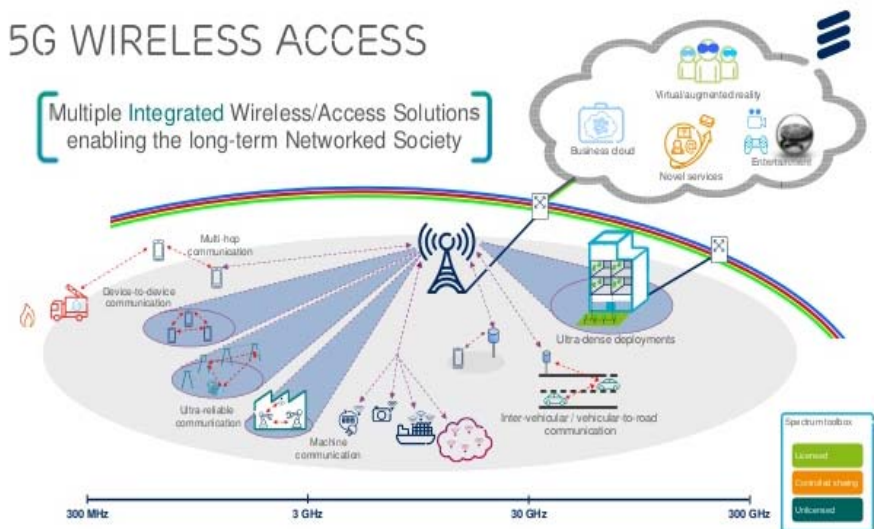
“ Samsung Electronics announced that it has successfully developed the world’s first adaptive array transceiver technology operating in the millimeter-wave Ka bands for cellular communications. The new technology sits at the core of 5G mobile communications system and will provide data transmission up to several hundred times faster than current 4G networks...5G mobile communications technology is the next generation of the existing 4G Long Term Evolution (LTE) network technology. 5G will be capable of providing a ubiquitous Gbps experience to subscribers anywhere and offers data transmission speeds of up to several tens of Gbps per base station.”

To understand the announcement better, I spoke this morning to Ericsson AB, the world’s largest telco infrastructure maker.

Ericsson, for long the major force in telecommunications infrastructure, takes the view that this is still a decade long process and they, plus the other big players in infrastructure, are only two years in.

“We think densification, many more or denser cells, using more antennas, and then going up in frequency indoors (high frequency doesn’t work well outdoors) is part of the answer. That’s one part of what we have seen from Samsung with this idea,” says Dr Afif Osseiran, who coordinates the METIS project, a consortium building out 5G ideas and standards.

But according to this diagram below, as Osseiran also says, it is only one part of a much larger solution:



Samsung hardly has a 5G solution but is working on one part of the pie. And Osseiran is also keen to point out that you still need plenty of fixed line capability. Ericsson expect over 500 billion devices to be connected to the Internet by 2020 and diversity in the network is key to enabling all that activity. He also points out that the aim is for 10 Gbps transmission. So this is not going to kill anyone’s technology, and it is years away from commercialization.

The worrying aspect of Samsung’s initiatives, for American and European companies though, is that Samsung has perfected an extraordinary capability to innovate and advance itself across a wide range of activities.

It is also developing significant and deep partnerships with telco carriers. It

not only gives them options in devices, it also provides solutions in small cell technologies – for example for use in arenas – to extend their network capabilities.

And at the same time it is now looking at more ways to help carriers to develop their revenues. It announced this morning a [partnership with Telefonica](#) to develop direct carrier billing for apps bought via Samsung devices and services such as Hub.

You could not make a carrier happier than inviting them into your apps' revenue stream. Telefonica already has such a deal with [Bango](#), and partnerships with Microsoft, Google and Facebook. But none of those can also offer you devices and infrastructure too.

[Samsung is producing a new philosophy](#) that emphasizes end-to-end support for its carrier clients. Nobody else is able to do that right now, and yet next in line is Huawei and then ZTE, not a US or European competitor. But even they will struggle to go end-tend from chip to infrastructure.

So the implications for Google and Apple? Samsung and Google are developing a deeper partnership. That much became clear when [Google announced a Google Galaxy S4](#) phone this week.

That means Google has high level support in developing its device strategy, from the company most likely to produce the important innovations in display, battery and processors. As Google improves its own UI design capabilities, Samsung becomes better allied to what is beginning to look like the world's leading software company. This is a significant partnership.

Apple on the other hand is still going it alone and while the i-range of devices is still a great brand, the risk of it becoming marginalized in a new era of innovation looks strong. What Google showed this week and Samsung has been demonstrating for a while is that innovation is now a different game – much broader in scope, often more narrow in focus, but incredibly fast. Apple is looking outpaced.

[Samsung Debuts The New Galaxy S IV](#)

This article is available online at:

<http://www.forbes.com/sites/haydnshaughnessy/2013/05/17/who-should-be-scared-of-samsungs-1gb-wireless-technology/>