

5G

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We are two years into the 5G transition though 5G infrastructure rollouts began in earnest in 2020, led by China, the US and Japan. The fact that these projects by and large have not been pushed back amid such a level of uncertainty speaks to their perceived strategic and economic importance, helped by record low interest rates. Dell’Oro’s RAN (radio access network) market forecast was revised up three times during the year due to the unexpected strength.

Different this time?

Those who have 5G access are now offered better responsiveness, greater bandwidth and faster download speeds. When fully rolled out, operators will be able to develop new commercial products, applications and services, and deliver them more cost effectively.

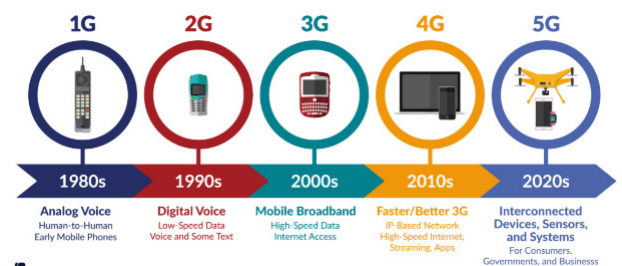
In previous upgrade cycles, real value accrued to applications that could make use of the new improved speed, bandwidth and location accuracy – ride sharing and food delivery, for example, would not have existed in a 3G world – and we believe 5G is no different. Livestream video gaming, AR and AV all need 5G to some extent and each has the potential to be a very big market. However, there are two reasons why the 5G cycle may be more interesting from a technology supplier’s perspective compared to what we have seen in the past:

- **New technology requirements**

There are several new technologies that are required by a successful 5G network, either due to spectrum characteristics or because of the applications the network wishes to deliver. These include the wonderfully named dynamic spectrum sharing (allowing current mobile phones to use new 5G capability), densification (more cell towers) and small cells (indoor base stations), massive MIMO (multiple input/multiple output, receiving multiple data signals at the same time), network slicing (multiple networks used across multiple operators), to name a few. This should translate into substantial dollar content growth for suppliers, which did not materialise for 4G.

- **Market share shift**

The demise of Huawei has translated into a big market share gain opportunity for Ericsson, Samsung and Nokia, just as the industry is about to embark on a major technological transition. Both Ericsson and Samsung have already started to see sizable new account wins/incremental footprint, while Nokia is lagging behind due to technology mishaps that stemmed from the acquisition of Alcatel Lucent in 2015. Not only does Huawei have significant market share to cede (over 30% share globally, according to Dell’Oro) – it is the industry price aggressor declining in dominance – we should also see better pricing dynamics going forward.



Source: Ericsson

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Not all plan sailing

Essentially a white-box solution for the telecom network, OpenRAN threatens to disrupt this cosy 5G cycle. Separating the software operating system from underlying hardware typically leads to standardisation and ultimately pricing pressure – there is a well-established precedent in the data centre market. While telecom networks may move much more slowly, if at all, than data centres, there are already a number of cloud/software-first RAN vendors while technology giants such as Hewlett Packard and Microsoft are also entering the fray, a strong indication that this market could be disrupted.

One other possible disruptor to the 5G rollout is that 6G is already being developed. The virtual world and augmented reality could soon be available through your smartphone...

Fatima lu**16 June 2021**

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