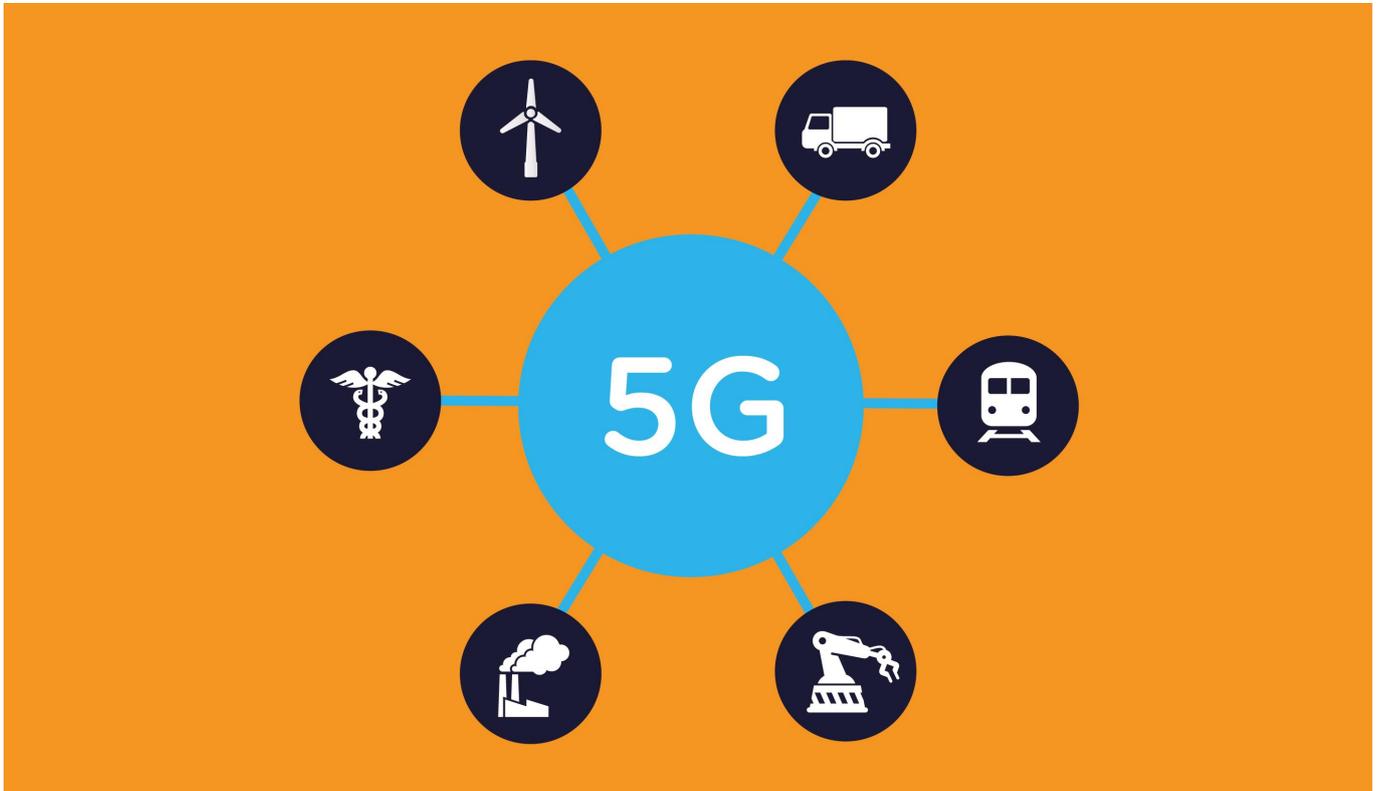


Sydney researchers are taking IIoT to the next level



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The Industrial Internet of Things (IIoT) is still in its infancy, but the potential benefits of the technology is clear – which is why so many businesses are rushing to adopt it. The problem is that the technology has several weak links that prevent organizations from realizing the full value of their investments.

Modern business works in real time, but latency within the IIoT and data storage stacks immediately slows down responses. This is particularly problematic where automated systems are expected to receive and respond to sensor data immediately.

University of Sydney researchers develop 5G networking

IIoT mobile network traffic is expected to increase thousand-fold in the next few years – at which point the latency of current 3G and 4G cellular networks will become a serious problem. Which is why researchers at the University of Sydney are working on 5G, the next generation of high speed radio-access networks.

Led by Professor Branka Vucetic, the Sydney team are working to develop a wireless network capable of supporting thousands/hundreds of thousands of connections with near-zero latency. The team has already deployed a test smart-grid as part of the Smart Grid Smart City (SGSC) project, connecting 30,000 households across New South Wales.

The five year project will look at a range of signal processing and antenna technologies with a view to improving

spectral efficiency in the 5G. It is hoped that these developments will improve IIoT performance in a range of sectors, particularly the healthcare and energy verticals. These advances will help organizations across Sydney, New South Wales and the whole of Australia.

Pressure on the data center

While the team at the University of Sydney is working on network latency, the CTO will need to make similar efforts to improve storage performance in the data center. The cost/performance ratio of flash storage has helped to reduce latency for mission-critical applications – but with potentially millions of IIoT sensor records being created every day, the cost of storing them on flash indefinitely may still be too high.

The CTO needs to begin planning an intelligent system to manage the storage and migration of IIoT data between high cost, high performance flash storage, and lower cost, lower performance disk storage once the need for immediate access has passed. Software Defined Storage offers exactly this kind of intelligence – which is why businesses should be investigating its use *before* the Sydney team finish their work, otherwise your data center may become the new performance bottleneck.

To learn more about software defined storage and reducing data center latency, please [give us a call](#).