

Sprint, Ericsson tout field tests for 2.5 GHz Massive MIMO

By **Monica Allevan** • Sep 12, 2017 03:54pm

5G

Massive MIMO

ericsson

Sprint



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SAN FRANCISCO—5G is a key theme for Sprint at Mobile World Congress Americas this week, and its demo with Ericsson played into that theme, revealing 2.5 GHz Massive MIMO field tests they conducted in Seattle and Plano, Texas.

The two companies are preparing for commercial launch of Massive MIMO radios, which they say are capable of increasing Sprint's network capacity by up to 10 times. The radio units are not imposing—Sprint had one attached above its meeting room at its booth—but it still will need to get the requisite zoning permits.

Sprint plans to deploy 64T64R Massive MIMO in cities across the U.S. starting in 2018, but it will be selective. For example, the waterfront park in Seattle where it did a deployment is crowded and all major operators have challenges serving the area.

Sprint believes its latest innovation with Massive MIMO, however, will give it a leg up on the competition, including due to its treasure trove of 2.5 GHz spectrum.

“It is a stepping stone from where we are today,” said Sprint CTO John Saw. “We’re building the foundations for 5G. Massive MIMO is a key enablers for 5G” at high band spectrum and 2.5 GHz allows Sprint to introduce it early.

According to Nishant Batra, head of Network Infrastructure at Ericsson, Ericsson and Sprint have been collaborating on new technologies and continually evolving Sprint's LTE network, laying the foundation for 5G.

Ericsson's next-generation 5G-ready TDD 64T64R Massive MIMO radio (AIR6468) will help maximize spectral efficiency of Sprint's 2.5 GHz network, and it will also provide a cost-efficient way to support Sprint's customers' growing appetite for increased capacity and high-speed data services.

RELATED: On path to gigabit LTE, Sprint moving download/upload configuration to 3-1 to support 12-1 traffic ratio (<http://www.fiercewireless.com/tech/path-to-gigabit-lte-sprint-moving-upload-download-configuration-closer-to-12-1-traffic-ratio>)

64T64R Massive MIMO radios use 128 antenna elements--many more than what is used for 2T2R, 4T4R, or 8T8R in a typical 4G LTE network today, Sprint said. These Massive MIMO antennas use advanced horizontal and vertical beamforming technology to focus and transmit cellular signals into targeted locations, Saw explained, using spectrum more efficiently and delivering faster speeds and more data capacity in high-traffic locations.

It's also the industry's first live eCPRI installation, which allows for several deployment and performance advantages to operators in the 5G era, according to Batra.

“This product is just the bridge over to 5G,” so when Sprint decides to move to 5G New Radio (NR), it will already have 5G in the network, so it's just a software upgrade to go to 5G, he said.

Sprint [has been working to introduce 1 Gbps speeds onto its LTE network](http://www.fiercewireless.com/wireless/sprint-cto-hints-at-1-gbps-class-speed-2017-challenge-to-t-mobile) (<http://www.fiercewireless.com/wireless/sprint-cto-hints-at-1-gbps-class-speed-2017-challenge-to-t-mobile>) in advance of a 5G launch that's currently planned for 2019. Sprint has said it will speed up its LTE network through several tools at its disposal, including three-carrier aggregation.

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