

OFFICIAL SHOW DAILY

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Nokia's Suri Lays Out the 'Why' of 5G

BY DIANA GOOVAERTS

There are just some things 4G cannot do. Nokia CEO Rajeev Suri took the 5G discussion in a different direction Thursday morning on the keynote stage when he addressed not what 5G will be but why the industry is pushing toward the next generation technology.

According to Suri, the transition from 4G to 5G isn't an upgrade for upgrade's sake, it's a necessary improvement to facilitate a new era of human innovation.

"4G is great, but the future requires 5G," Suri said. "The fact is that 4G, while a big step forward, has largely been about doing what 2G and 3G could do just better and faster. While the continuing evolutions of 4G

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Cuban: Wireless Still Waiting for Game-Changing Application

BY DIANA GOOVAERTS

American businessman and entrepreneur Mark Cuban has a prescription for the wireless industry.

No, it's not more cowbell; what Cuban said wireless needs is a mainstream high-bit application that will help drive adoption, innovation and the industry's conversations with federal regulators.

According to Cuban, the industry currently lacks a mainstream app that consumes a large, steady stream of data, an app that would motivate the public to get behind the push for more bandwidth.

"When you look at apps, you know, the most popular ones don't consume a lot of bandwidth," Cuban said. "And maybe autonomous cars will be that, maybe telemedicine will be that, telesurgery, maybe



robotics, but there's no mainstream app that just says 100 megabits per second sustained, no drop outs. Because of that, that changes the discussion with the FCC, it changes the way people perceive the need for bandwidth."

Since most consumers mainly interact with low bandwidth apps like Facebook or Snapchat, Cuban said they're not looped in to

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Networks Heat Up on Day 2

Thursday proved to be a scorcher in Las Vegas both outside and inside at the Show as the mobile networks were in overdrive in their attempts to meet the demands of the masses. In the thick of it were the network testing specialists at Global Wireless Solutions (GWS), working tirelessly to bring the good people of CTIA a transparent report of carrier performance.

The folks at GWS didn't hold back any punches, either, using their own in-house developed algorithms to rigorously test the networks in terms of speed, reliability and voice quality. No one is safe from the benchmarking machine that is GWS, and their data already shows that the carriers are clearly stressed on accommodating mobile activities—albeit quite admirably.

During testing on Day 2, Verizon VoLTE was the only network to experience any

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voice call failures, which included a dropped call at the entrance to the exhibit floor from the registration area. All in all, most voice networks experienced a considerable improvement from last year's results. Over the course of the week, AT&T and Sprint both improved from 5 call failures each last year to none this year. Even with its struggles on Day 1, T-Mobile still improved from 17 blocks in 2015 to 11 this year. Rounding out the voice results, Verizon went from having no failures last year to one single drop this year.

GWS transferred 10 GB of data while completing 2500 tasks on Day 2 during the two hour test of the halls and exhibit floor. AT&T and Sprint were the only two networks to successfully complete all 600+ tasks tested on their networks. T-Mobile failed a task near the drone course in the Connected Life Zone, while Verizon failed a task at the Retail Zone bistro.

AT&T and Verizon continued to set the pace for raw speed -- both provided average download speeds of about 23 Mbps. If you're lucky enough be sitting under one of the dozens of antennas mounted on the ceiling, your AT&T speeds could spike to 50 Mbps per task, about 10 Mbps faster than Day 1. Verizon's peak task throughputs stayed consistent at about 40 Mbps. Sprint and T-Mobile delivered average download speeds of 10-12 Mbps, which is a

significant improvement from T-Mobile's difficult Day 1. Upload speeds continued to see AT&T and Verizon posting selfies within 2.5 seconds, while Sprint and T-Mobile were about twice as slow. Compared to last year's CTIA, AT&T and Verizon both roughly doubled their speeds from about 12 Mbps to the current 23 Mbps range. Sprint's 12 Mbps speeds were slightly improved over last year's 9 Mbps. Unfortunately, T-Mobile's first-place 22 Mbps throughputs seen last year were roughly halved this year.

It's a wrap - GWS has finished testing and packed up their gear. So how did the networks fare? According to GWS CEO, Dr. Paul Carter: "We're seeing these networks continue to evolve. Technologies such as VoLTE and HD voice that were considered advanced last year are mainstream this year. Although these networks were clearly stressed as large numbers of attendees came on to the networks at the same time every day, they were prepared. AT&T and Verizon in particular showed dramatically increased speeds over last year. Overall, using GWS's proprietary OneScore methodology (which considers results from both the voice and data networks), Verizon and AT&T easily beat out T-Mobile and Sprint during this year's show." ●

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the feeling of urgency for more bandwidth that is prevalent in the telecommunications industry.

Cuban said the application that finally catches people's attention won't be for streaming "reruns of Gilligan's Island," but will be a use case for "something of importance" in people's lives. Right now, he said, applications aren't changing people's lives, they're just simplifying things.

"That's the challenge right now, there's not that application that just drives everything," he said. "We need that 'Okay this is a game changer' and that will drive adoption and speed just like Internet drove adoption of broadband."

During his keynote appearance, Cuban also raised the question of whether the advent of 5G would lead consumers to cut the Internet cord en masse.

"Just like they cut the TV cord to Internet and just how really we don't wire our homes anymore, are people already so used to using wireless that when they're getting 100 megabits per second of throughput – maybe a little more, maybe a little less depending on circumstances – are they just going to say what do I need this wire for?" Cuban said. "Those are the big questions." ●