



- Will Townsend: I want to welcome viewers to the T-Mobile Six Five Summit session. Mishka, it's a pleasure to speak with you again.
- Mishka Dehghan: Will, same here. Always lovely to be with you.
- Will Townsend: Awesome. Well, let's get started. So today we're going to discuss the Connected Intelligent EDGE. So how does T-Mobile define that?
- Mishka Dehghan: Well, let's look at where the Intelligent EDGE really is. It's where the action is. It's in an ICU room, on a factory floor. It's in a military base, in the baggage claim and operations area of an airport. It could be in a warehouse. It could be in your car or out on the sea. The Connected Intelligent EDGE is wherever the things are in the Internet of Things. Where are we headed with this? We are at the precipice of billions of AI powered devices, 5G connectivity, and efficient application processors, all converging together to provide intelligent insights and control, right where the information is needed the most. For example, at one of our recent customer deployments, SailGP. Think of SailGP as the formula one of sailing. It's a race with boats, going on the water at incredibly fast speeds. Where athletes really need information so that they can make just in time right decisions, that would make the difference between winning the race or losing the race.
- And we set up 5G connectivity using a hybrid network, which gathered hundreds of thousands of bits of data from telemetry devices and everything happening on the water. From the speed, the wind and the wake of the boats next to them. All this data was sent from the boats to the coaches who were on the shore and they analyzed the data via the Intelligent EDGE and providing the athletes the information that they needed to lead them to victory. So what makes this Intelligent EDGE really differentiated, is the analytic capabilities that leveraging 5G and AI can bring to this new ecosystem. We process all of this at the EDGE to reduce the latency. And that speeds up everything that the users need to be able to run their applications more efficiently, regardless of what those applications are. The speed of the 5G connectivity, and the Intelligent processing of AI and machine learning, all come together with processing at the EDGE so that we can have the data when and where we need it the most.
- Will Townsend: Well, it sounds very compelling. I love that use case around the sailboat, but is it available today to enterprises just on a broad basis?
- Mishka Dehghan: You know Will, this is a question that we get all the time. While many of these technologies are nascent, a lot of organizations are already leveraging these technologies today. I mentioned SailGP, but for example, warehouses today, regardless of the industry that they're operating in, there are leveraging smart, intelligent picking robots, that gather data via cameras and sensors. And with AI processing, all of this data at the EDGE, the processor can then control the robot efficiently to pick and then return items to the right place in the packing areas of a warehouse. As new standards of 5G continue to develop, such as precise asset tracking in three dimensions alongside with even further innovation in AI and machine learning algorithms. We'll begin to see innovation that we can only imagine today. But to answer your question directly, yes, it is available now and many companies at the forefront of innovation and technologies have already adopted these nascent technologies.



- Will Townsend: From my perspective, EDGE technology can supercharge 5G use cases. But a lot of the use cases that you were just describing involve massive IoT. And as we all know, that increases the overall threat surface. Today, cybersecurity is in the news with nation state attacks, the geopolitical environment. What are the security risks, Mishka?
- Mishka Dehghan: I think that nobody is going to deny that the security risks are increasing because basically we are increasing the surface area of where the technology is going. So, yes securing the EDGE can seem daunting. There is a high number of devices that constantly generate data that then needs to be sent for computing to be ingested, transformed, and analyzed, and then sent back to either a device or an individual. So the more assets move outside the data center, the more workers and employees are on the move and mobile, then it increases the risks of traditional security.
- It's a whole new world. But fortunately, innovation is taking place in the cybersecurity world with the SASE, which is a framework for security driven networking, that allows distributed administration of security management, no matter where the device, the computing or the individual is located. So, security is an essential element for successfully deploying all of these digital transformation use cases. And depending on the deployment model used for the connectivity and EDGE computing, the Connected Intelligent EDGE can deliver even greater security and privacy by keeping critical information... as an example, personally identifiable health data, at the end point, rather than having to move them over networks.
- Will Townsend: I'm glad you touched on SASE because the integration of security into the overall connectivity stack is bolstering the capability of security provisions in general. And it's no secret also that the 5G new radio standard has fast improvements in security over LTE. But you also touched on realtime insights. And from my perspective, that's one of the superpowers that EDGE brings. It's putting computing closer to the data creation points, but beyond realtime insights, are there other benefits for customers?
- Mishka Dehghan: Oh, absolutely. Real time insights is to me, the enabler of what these use cases need to be. But the other benefits is the timeliness that these insights need to be processed at. And to do so organizations need to improve not only bandwidth utilization, but overall infrastructure costs. And if connectivity to the cloud or the core is lost, then the EDGE operations can continue and then reconnect when resources become available again, thus maintaining data consistency. As an example, if I think about the world of data, sensors gather a large amount of volume of data that doesn't need to be seen or processed.
- Most organizations have very limited bandwidth to transmit data, and they want to make sure that they use their bandwidth as efficiently as possible. So many data from sensors and monitoring data, deliver a message that says, "Hey, I'm up, I'm running and all is fine, and there's no need to pay attention to me." If there is an outlier, then the message that gets communicated needs to be different. The message is going to need attention. The Intelligent EDGE can distinguish between unchanged status data and outlier information, minimizing the bandwidth required for processing and storage. So, overall improving bandwidth utilization.



Will Townsend: We've talked a lot about 5G. Obviously, T-Mobile is a leader, you've been first to standalone. You have the most complete spectrum footprint. I was one of the prognosticators that the merger would come together. I've taken my victory laps there. But what role does 5G play? Certainly, you can deploy within an enterprise network. That's not deploying cellular connectivity. You can deploy EDGE computing, but what does 5G do? I touched on the fact that EDGE can supercharge 5G, but would love to get your perspective.

Mishka Dehghan: I remember our very first conversation, Will. It was probably four years ago now in 2018, when we were talking about the future of 5G and how 5G will supercharge everything that we do in the technology world. And I think that you should continue taking your victory lap, not just for predicting that the merger between Sprint and T-Mobile would go through, but also really appreciating the fact that T-Mobile has the largest broadest and fastest 5G network distributed core in the country. Of course, as the 5G leader, advanced connectivity is really core in everything that we do and when one... We think about, how can we create new use cases and applications for our customers? So much of the connected Intelligent EDGE is really based on ubiquitous and perpetual connectivity to things, to people and to the environment.

So, while connectivity solutions such as 4G and WiFi are going to continue to support some deployments, they are going to rapidly reach performance limitations. It's important to remember that 5G... it's not just a faster G. Standards are developed with the needs of businesses and industries in mind. And it represents truly a paradigm shift in connectivity architecture. 5G will continue to eliminate the constraints of capacity, latency, speed, and bandwidth. Four vectors that are so core in enabling all of these newer use cases. When I think about the Connected Intelligent EDGE, I think about 5G, really being the critical currency enabling this world of innovation.

Will Townsend: Great insights, and you were touching on some specific applications very broadly at the beginning of our conversation. I'm wondering as you look out at the horizon there, are there any specific applications marrying 5G and EDGE that you feel are going to be completely transformative? And I hate to use the example in an LTE world with ride sharing and how LTE helped to basically disrupt an entire industry that needed to be disrupted. But I'm wondering from your perspective, what do you see as potentially the most transformative out there?

Mishka Dehghan: First of all, I love the question, because I think that it's industry wide question that everybody is debating with. I don't think that anybody can stand in front of the industry and say, "Hey, we have identified what the killer app of 5G will be. But one thing that I can tell you based on the deployments that we have done at T-Mobile, leveraging our 5G advanced connectivity and advanced wireless solutions for use cases for our customers. What enterprises are looking for regardless of the industry that they operate in is, end to end integrated solutions. What they are looking for is for somebody to come in, that's going to give them the hardware, the software, the application, the connectivity, the managed services and really giving them a single view a single... I don't want to call it throat to choke, but almost a single orchestrator of their entire ecosystem. Because if I'm in the manufacturing world or if I am in healthcare, or if I am in retail, I want to really focus my time in improving my own business, focusing on my business operations, creating better customer experiences.



And I really don't want to be in the business of managing infrastructure and solutions. This is where T-Mobile comes in by bringing together really a full suite of integrated solutions by industry. And today, when we look at what our customers really looking for, they are looking for that integrated end to end 5G enabled set of solutions that's really specific and relevant to their business, to their industry.

Will Townsend: Perfect. And Mishka, this has been a very insightful conversation. I'm sure our viewers have enjoyed it as well, but as a final wrap up, how do customers get started with T-Mobile?

Mishka Dehghan: Well, I'm just going to maybe answer the questions in two different ways. I think that many customers today are really trying to think about, "Okay, so I understand at a higher level the benefits of 5G. But if I'm the CIO and I have to reconcile sometimes the conflicting or the overlapping requirements of various business units, how do I think about that?" So that's where T-Mobile can step in and help. We can help and we would come in and first understand, what's the business outcome that the enterprise is trying to get out of that deployment. Once we understand the business outcome, then we put together the technology solution and something that can really deliver in a very concrete way to the CIOs who are going to be making the decision about transitioning to these new emerging technologies on the ROI benefits of the deployments.

That's where I think enterprises are looking for an expert in this field. And when it comes to 5G, I think that T-Mobile has a proven track record that we are the leader in this space, and we've done many deployments over the last 12 months and we want to continue accelerating our growth in the enterprise and government space, working with the many enterprises that are looking forward to adopting these new technologies. So, just reach out to us and we're here to help.

Will Townsend: Well, Mishka, I always love talking 5G with you. Thank you for your time. And I want to thank our viewers for tuning in.

Mishka Dehghan: Well, thank you so much for having me today, Will. I really appreciate it. I really appreciate everything that the Six Five Summit does for the industry in really educating and raising awareness about these emerging technologies. Always a pleasure being with you and good speaking with you today, Will.

Will Townsend: Thank you Mishka.