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EDITED TRANSCRIPT

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OVERVIEW:

Company Summary

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Kannan Venkateshwar *Barclays Bank - Analyst*

PRESENTATION

Kannan Venkateshwar - *Barclays Bank - Analyst*

Right, get started on the next one. Really glad to have with us Joe Russo, who heads Global Networks for Verizon. And I think the timing is perfect in the sense that there's a lot of noise on technology, and you know what's going across the ecosystem. So great to have you, Joe.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Pleasure to be here.

QUESTIONS AND ANSWERS

Kannan Venkateshwar - *Barclays Bank - Analyst*

Maybe we could start off with your network priorities for the year, what you're focused on right now. And there's a lot going on in the industry, of course. It would be great to get your perspective.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. So as I suspect, I'll make some forward-looking statements which carry risk and uncertainty. I first would like to draw everyone's attention to our Safe Harbor statement which you can find on our investor website. And there it is, very good.

So network priorities. And when you say this year, I would say it's a very common year after year priority. I've been at Verizon for 30 years and when I think about our strategy for the network, it's rooted in what we call our mission, which is to provide our customers the best, most reliable, highest performing, and secure networks so that they can do what they want to do where they live, work and play.

And so this year, if I think about what are the key things we're doing to fulfill that mission, I'll start with our mobility network. Crown jewel, we love it. It's never been performing better. We just took several 5G awards in route metrics, which I'm very proud of. But we're continuing this year to build out our ultra-wideband network aggressively, and we've been on that journey for several years now. This year we'll once again put a ton of investment in C-Band and millimeterWave to get more and more customers access to that ultra-wideband experience. So that's one of the key factors for our network strategy on the mobility side.

The other thing we're doing in mobility this year, which is a little new, is starting to really ready the network for 5G advanced services. So we have our stand-alone core fully functional at this point, 100% virtualized, migrating customers to that aggressively. We have all of our C-band sites now SA-ready.

And that, in our view, gives customers the ability to get a 5G advanced user experience with that ultra-wideband experience. So this now unlocks things like slicing and other capabilities. So we're readying the network for 5G advanced features. It's another big thing on the mobility side. And

then the other thing we just do strategically is make sure that wherever we need capacity and capabilities to drive revenue and customer experience, we put those solutions into the network. So on the mobility side, that's what we're focused on in 2025.

On the broadband side, we have ramped up our build inside of our ILEC. We're anticipating building about 650,000 prems this year, which is up from prior years, and we're readying the organization for Frontier acquisition, hopefully coming soon. And then the other thing we're doing on the broadband side, which is directly aligned with the mobility first approach for C-band and millimeter wave, is continuing to expand the capacity and capabilities to deliver fixed wireless access.

And we're doing that through two ways. One is our C-band deployment and our small cell millimeter-wave deployment. And then the other thing we're doing, which I announced late last year, is we're now using millimeter wave to serve MDUs as well. So in the short time we'll see some more and more markets open up with that solution, which I'm super bullish about, which can deliver 1 gigabit speeds in MDUs in a super reliable way using millimeter wave.

So on the broadband side we have fiber, fixed wireless access and this new MDU solution that are all bringing more and more capabilities to customers to get broadband from Verizon.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. Yeah. We'll touch on fixed wireless. Maybe one place to start off is fiber because, obviously, the focus there has changed a little bit over time. You guys were the pioneers in the industries with Fios. But then returns were not as you expected, and so you pulled back a little bit. And now, of course, you're going all in on fiber. So could you maybe talk a little bit about what's changed from a deployment perspective?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Okay. Sure. And Brady bust my chops a little bit because I have the very first ONT we ever hung on premises in my office. So I've been doing this a long time. And a little bit contrary to your question, over the 20 years, we haven't seen the dynamics change very much. Now we had an aggressive build, obviously, early years. We scaled that back a little bit largely because we were making other investments in other areas. It wasn't really the economics that drove those decisions.

And now we're seeing some changing dynamics that make us even more bullish about our fiber investments. So let me talk about a few of those things. The first is the demand for reliable, high-performing broadband continues to grow. So we see our 12-month penetration, meaning when we deploy fiber to a new home or business, how quickly we penetrate in the first 12 months, we're seeing that improve year-over-year. So people are adopting our fiber product faster than years prior.

The other dynamic we're seeing is more and more customers looking to buy both home and mobility from us. So that changes the dynamic as well. It allows us to put our home and mobility products together. It allows us to deepen the relationship with customers, add perks and other value-added services now for both the home and the mobility. So that dynamic is making it better for us to be in more and more places with fiber.

And then on the efficiency side, as you get out further and further away from the dense metro areas, it has been more and more challenging to build. But we have with Corning and CommScope some really new innovations over the past two years that have allowed us to much more efficiently deploy fiber in more rural areas. We're wasting less fiber and we're connectorizing so much more of it, but it's easier and more efficient for my team to build. So these dynamics on the upside and the cost and efficiency side are making the fiber business better and better for us every year.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. And so when you say cost and efficiency, you meant also when you look at cost per passing historically versus now, there is definitely some benefits for you that you're starting to realize?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yes. Absolutely. Even if I look at '23 versus '24, we saw a little over a 10% improvement in our cost-to-prem pass, even though we're getting out further and further away from dense areas. So we're seeing this dynamic really help us. It's not just the cost per passing that I look at as well. It's how much does it cost me to install, how quickly can I install, how often can customer self-install, all of those metrics are improving as well. So that efficiency just helps us and helps the business case better.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. Another big talking point, of course, is satellites.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

I saw you had Globalstar here, just before.

Kannan Venkateshwar - *Barclays Bank - Analyst*

I know. Yes. They had some interesting things to say, by the way, about MVNOs. But I mean, see, one of the things that obviously confuses folks a little bit is just there are two different models right now. One is the Apple model and then what you guys are doing and what T-Mobile is doing. So maybe it will be good to get some framework. How complementary is satellites to your terrestrial networks? And how is your approach different from others in the industry?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. So I think the approach is a good place to frame the conversation. So if we think about our strategy and approach to satellite, it starts with a fundamental belief that we want people connected via terrestrial network whenever possible, which is why I'm aggressively deploying solutions to make sure that coverage and capacity is where it needs to be.

Because when you're on a terrestrial network, when we're using our spectrum on a terrestrial network, we get great benefits for customers. You can do calling and texting and video chatting, you could be searching the web, you could be streaming videos. These are all capabilities you have on a terrestrial network. Fundamentally, we want to be there where customers live, work and play. And today, my network covers over 99% of where people live, work and play.

That being said, there are places, fewer for Verizon than maybe our competitors where our terrestrial network doesn't reach and customers may want to be there. It's why we started with Apple and Skylo to put capabilities in the hands of Android users and Apple users to make sure that if they need to be connected in an emergency situation in those non-terrestrial network areas, they can stay connected.

But as the satellite technology continues to evolve, it's now starting to unlock additional services. So we're now entering the point-to-point messaging -- or peer-to-peer messaging phase. As we just made an announcement this week with AST. We completed our first video call. So now we're in the data world of satellite technology.

And my goal is in these areas where less than 1% areas where people live, work and play, if I can find a way to start to build capabilities for customers to do all the things they love to do on a terrestrial network, then we want to be there, which is why we partnered with AST. And we think they bring great technology and super innovation to get us beyond emergency texting into more and more value-added services over time.

But that's not here today. So generally, my main focus is on continuing to build out that terrestrial network. But we love the position we're in. Our partnerships with Skylo and Apple give customers on the Verizon experience the same capabilities as they were with a competitor.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. I guess one more headline this morning on satellites was SpaceX and what they're trying to do with the FAA. I know it's not a very big deal for you guys, but you do have this $2 billion deal with the FAA. So any early thoughts on that headline? --

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yes. I don't know much about the headline. I read it late last night and again a little bit more detail this morning. Let me first start just our relationship with the FAA. So as you just mentioned, we have a $2 billion deal with the FAA to modernize their network infrastructure, and they chose Verizon because of the mission I talked about before. The reality is, its reliability and performance are what the FAA needs, what we all need. And when we propose the solution for them, it was rooted in our deep engineering mission to deliver the best, most reliable networks, which is why they chose us.

We're in the midst of rolling out that network. It is not operational yet today but will be shortly as we continue to build in additional reliability and performance for the FAA. All I know is if they are testing, it sounds like they're testing in three locations using StarLink for some connectivity. I don't know for what applications. I heard weather applications. I think that can be complementary to what we're trying to build to really run the FAA infrastructure.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. Yeah. Right. You mentioned millimeter wave and the MDU solution. And obviously, you were early when you got into that market. You were part of the early deployment plans. So maybe you could talk about the newer approach and what the learnings were from the earlier deployment? And what does your road map look for?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Sure. Yeah. And we were early to millimeter wave because it was a spectrum we had, and we had capacity needs. And it was a great and continues to be a great solution for my engineers to deliver capacity in dense areas that you can't deliver with any other spectrum.

And when I look back to the past few weeks with Super Bowl and the Philly Parade, the experience that customers were able to get, the way they could stay connected with tens of thousands of people around them would not be possible without our deployment of millimeter wave, plain and simple.

Along the parade route, we had hundreds of millimeter wave nodes deployed in that city. And we saw tremendous usage, both in the uplink and the downlink during that parade. During the Super Bowl, people streaming the game in the stadium around New Orleans, just staying connected. It's almost now they don't even realize how easy it is for them to stay connected with so many people around them.

I live at the Jersey Shore. It's another place where when you get thousands of people at the beach, having our millimeter wave nodes along the boardwalks has proven to be an unbelievable way to serve that customer base and that capacity needs. So we're going to continue to do that. We have over 50,000 small cells deployed on millimeter wave, and we continue to add as we see capacity needs in places where millimeter wave is going to be useful.

That's not useful everywhere. There's lots of line-of-sight challenges and other things that we manage, but it is a great tool in our toolbox and one that we continue to invest in and continue to make sure that the ecosystem understands the importance of it.

Kannan Venkateshwar - *Barclays Bank - Analyst*

In terms of the MDU deployment path, how far along is that --

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Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. So it's pretty far along. We've been doing trials, technical trials, and now we're in customer beta trials. So customers are using the service today. And like I said before, I love the performance and reliability that we're seeing. And I would stay tuned in the next month or so for some launches that we'll start to be doing in markets across the country to deploy this solution.

But what I really like is that -- again, I've been in the fiber business a long time. And when you approach a business owner about bringing fiber into their building, there can be challenges associated with that, right-of-way challenges, construction challenges, et cetera.

The other thing I really like about this solution is it's much easier on the building itself. I could reuse almost all of the existing infrastructure in the building. I need to put some hardware on the rooftop of the building, and that's it.

So MDU owners are much more receptive to allowing us into the buildings, which I was worried about that is what I would say, having scars from the Fios days. But we've seen some great uptick from MDUs where they want the competition, they want new solutions and new technology in their building, and this is a great way to give it to them.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. Yeah. On the wireless side, AT&T seems to have taken this big step of moving its core to Microsoft. And your approach is slightly different. And you've built your own cloud.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

I think vastly different.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Yeah. I agree. So could you maybe talk about these alternative paths to virtualizing your networks? And is there a CapEx-OpEx benefits? Is there an operating benefit that you realized from your approach?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

So let me start with the strategy. And as we saw technology evolving in this space and more and more of our core applications moving to a virtualized environment, part of what we believe makes us best in this industry is that I have teams of engineers, the best in the industry, at what we do.

So our philosophy was if we are going to be the best in cloud computing, in virtualized and cloud RAN in the core to make sure that our customers get that mission I talked about before of best, most reliable, highest performing, then I better have an organization who's best at that too.

So certainly, we did the business case around efficiencies and effectiveness, but it was also about having teams of engineers at Verizon who knew how this worked and understood how to use it to our competitive advantage. That still holds true today.

So I have a great team of folks who run our core cloud. We call it our VCP, our Virtual Cloud Platform. We now have 40% of our radio access network virtualized as well. As you know, we were early adopters of mobile edge computing, which is another cloud platform. So we're running these cloud platforms from the core all the way through the edge of our network.

And scale and efficiency is another benefit. But most important to me is, we are now industry experts, world-leading experts in how to run a telecom infrastructure on cloud infrastructure, which gives me competitive advantages when I do things like slicing or when we're putting private networks with AI applications on it.

My team understands how to make that work for customers. And I see nothing but upside because it's where the industry is moving. And as we see more and more AI applications bring up, our belief is they will continue to move further and further, deeper and deeper into the network. And that's what we've been preparing for.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. Is that would also keep you away from maybe the O-RAN approach that AT&T has taken? Or is that something in your future road map?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. So we're bullish on O-RAN. I mean this is the reason why we did the deal with Samsung, is we created a virtualized RAN solution, industry-leading, the largest in the world. All of the Super Bowl and all of the parade that I just talked about all run on our Samsung virtualized RAN applications. And that's in preparation to then move to an O-RAN. So I think we're now 130,000 - 140,000 O-RAN-capable radios in our network. 40% of our radio access network with Samsung is now virtualized. We're on this path.

To be honest, your question about AT&T is, the way I see it, we're on the path, and we're probably about five years into this path, 40% of the network done. The other parts of the network are largely with another supplier who's not ready yet. And that's where AT&T's announcements have come from. So my view is we're four or five years ahead of the rest of the industry on virtualizing and moving in that O-RAN direction.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. In terms of capacity, it feels like we are in a period where there might be a lot of spectrum that comes up. I mean you, of course, have AWS-3, but then you also have talks of the [7] (added by company after the call) gigahertz, you have C-band potentially. Could you talk about your capacity needs, maybe both short term and long term that can be complemented by some of the other stuff coming into the market?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah, yeah. Absolutely. And it's a bit of a changing dynamic, as you just said. I mean just several months ago, the story on spectrum was there was no story. And I'm super pleased to see the new administration starting to talk about how spectrum could be potentially auctioned for us to use. And I think that's good for the industry. I think it's good for consumers. I think it puts lots of technology and innovation in the hands of Americans, and I think that's all a really good thing to be doing.

But we've never been in a better spectrum position. And as we continue to deploy millimeter wave and C-Band, we don't see in the short term any capacity constraints that will be driving us to need additional spectrum. But as any good engineer, we're always looking for new opportunities, right? It is our currency to work with. So we'll see maybe later this year, early next year, the AWS spectrum will come out. Certainly, that plays in our portfolio since we're in that band today and our radio support it.

And then I think the other spectrums you talked about are probably several years out, which I think is probably the right timing anyway for our industry as we continue to look out. We do a five-year forward projection. And in that five-year horizon, I'm out building what we think the capacity

needs will be with the existing spectrum we have today. But beyond that, you always still anticipate needing additional spectrum. So I think the timing is right, and I'm glad the administration is talking about it now because it takes time to make this spectrum available.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. And you mentioned briefly some of these network capabilities that you're building. It enables new applications and so on to work on your network a little bit better. So maybe we could just expand on that topic because you've announced some API integration there. And that seemed like a pretty big shift in terms of industry dynamics because applications are now controlled, for the most part by the Apples of the world. But this might give you a way back in I guess, into some of these applications or integrated at least a bit more with your network.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. I think that's more the way I see it, right, is I want people to use the capabilities of our network. And if that means we can expose APIs that allow them to leverage the power of our network and build applications that customers use more and more, that's good for us, right. And that's the reason why we did the partnership with Ericsson, why we're so supportive of the work that GSMA is doing around standardizing APIs so that application and developers and enterprises use our network in new and creative ways.

It's early days for that, but there's 29 standards that have been issued. We're supportive of all of them. We have several in the market, and we'll see how that evolves. Beyond that, though, I'm very bullish on what I see in the industry both on the enterprise side and the consumer side around leveraging 5G-Advanced.

And I get the question a lot about the adoption of 5G and the monetization of 5G. And it has actually exceeded my expectation largely on one product, which is fixed wireless access, right. But what we're now seeing is, on the consumer side, device form factors and new applications and innovations that will leverage the capability of 5G-Advanced features. I absolutely see in the next several years, the AI applications that we will be using in our personalized leveraging the capabilities and capacity that we put in the network today to do uplink, as an example.

I talked about the parade just the other day. Typically, we see a 90/10 split between downlink and uplink. Our statistics following the Super Bowl parade in Philadelphia was more 60/40. So 40% of the use is uplink only. And that dynamic continues to change as people are doing more and more user-generated content, as they're streaming more of the experience. What we also are preparing for is the capturing of video to help you what environment you're in to provide personal assistant, things like that. So I'm super bullish on how 5G-Advanced will continue to bring more use cases and modernization opportunities for the industry.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. And you mentioned standalone core earlier getting more ready in that road map. I guess you do need stand-alone core for some of the applications like edge compute for instance, or network I think maybe. Could you talk about maybe how these applications scale now that your network is closer to where you want it to be? When should we start seeing some of these newer opportunities starting to scale?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. I'll start with part of what we're seeing now in the scaling of the 5G core and our core being 100% virtualized is our ability to scale up the applications in the core based on usage. I'll go back to a comment I made earlier, our plan for stand-alone capabilities and slicing is to leverage Ultra Wideband. That is a differentiated experience. If we're doing slicing on the low band, to me that's a 4G experience. There may be some IoT use cases where that makes sense for low usage. But generally, when we see kind of how scaling happens in this space, it's leveraging that Ultra Wideband experience.

And by virtualizing our core, we are now able to spin up applications literally real-time based on high demand. So a lot of work going on there to scale those capabilities and allow the applications to leverage those capabilities to scale up and down based on needs, right. So we have lots of trials going on with first responders, with our communication slice for video calling, for work from home, et cetera. But we think it's just the tip of the iceberg as to how this will start to scale and leverage the cloud computing and virtualized network that we've built.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Got it. In the last minute that we have, maybe we can touch on AI a little bit more, which is -- there is some commoditized applications like data centers for instance, or maybe backhaul that look like they're low-hanging fruits and there could be an opportunity there. And I'm sure there's other stuff behind that. So could you just talk about where your focus is right now when it comes to AI?

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Yeah. And Kyle mentioned this in the last earnings release. We're putting this under the umbrella but we're calling AI Connect, but it's really reimagining our assets for this new AI system. And I'll put it in three buckets today. So the first is, as you said, a little low-hanging fruit, right. But it's fiber and wave services that are in great demand right now. And we continue to get more and more customers looking for us to either leverage our existing ultra long-haul network and our One Fiber network or to build off of that network. So as Kyle mentioned, we have the largest deployment of fiber across the country that's close to enterprises. So we're seeing continued growth in that area. So that's the first pillar, which is fiber and wave.

The second is a little bit unsexy, but it's space power and cooling, right. I sit on thousands of central offices and data centers in our network. And this is an asset that we think can be leveraged and utilized. And we'll see more and more of that develop, we believe, over the next several months and years, as I mentioned before, as this compute starts to move deeper and deeper into the network. So that's the second pillar.

And then the third is, generally, I'm calling it programmable networks, right. But it's how do you tie the space, power cooling and the fiber and move workloads around in a more programmable way. And we've talked many times about our Intelligent Edge Network. It's a multipurpose to move access data, whether it's our RAN data or our fiber data or enterprise data, through the metro networks into the long-haul network. So this is another asset to leverage in a programmable network way to move data and workloads around. So that's the third asset that we're really trying to capitalize as we see this AI ecosystem develop.

Kannan Venkateshwar - *Barclays Bank - Analyst*

We're out of time, Joe. Thank you so much for being here.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

Absolutely it was a pleasure. Thank you.

Kannan Venkateshwar - *Barclays Bank - Analyst*

Thank you.

Joseph Russo - *Verizon Communications Inc - Executive Vice President and President - Global Networks and Technology*

I appreciate it, thank you.