Presenters: Lisa Porter, Deputy Undersecretary of Defense for Research and Engineering; Ajit V. Pai, Chairman, Federal Communications Commission; Diane Rinaldo, Acting Administrator, National Telecommunications And Information Administration

November 4, 2019

Deputy Undersecretary of Defense Lisa Porter Remarks at MWC L.A.

DEPUTY UNDERSECRETARY OF DEFENSE LISA PORTER: My name is Lisa Porter. I am the deputy undersecretary of defense for research and engineering, and I'm pleased to share the stage today with Chairman Ajit Pai and Administrator Diane Rinaldo, who are coming out right now as I speak. So here they come.

(APPLAUSE)

So I'm going to provide an overview of DOD's perspectives on 5G and our plans going forward, and they I will turn it over to Ajit and Diane to provide a few comments to close out our session. And I'd like to start off with an observation that I think is obvious to everyone attending MWC LA, but I don't think it's obvious to everyone generally. And that is that 5G is not a mere extension of 4G. And in fact, ultimately it really isn't going to look anything like 4G at all. It's not about cell phones or downloading cat videos more quickly or even the radio access network. So fundamentally 5G is all about ubiquitous connectivity.

And when we consider what ubiquitous connectivity truly means, the transition from discrete to fully distributed computation, communications and data curation and management, we recognize that 5G represents the convergence of a whole host of technologies, from micro electronics to edge computing to virtualization to artificial intelligence to software defined everything. And we should be humbled by the realization that we cannot even begin to predict the innovations that will emerge. Many have observed that no one predicted the advent of Uber when the smart phone first came on the scene.

And similarly, linear extrapolation from 4G cannot even begin to provide us a glimpse into what is coming. But one adage that I have come to truly believe is that the best way to predict the future is to create it. And the DOD wants to work with industry and academia to do just that. Now, this is nothing new. History is replete with examples of the DOD partnering with the private sector to foster innovation and collaboratively bring leap ahead technology to the forefront. The result has often been dual use technology that benefits national security, industry and the American citizens.

But we must also recognize that while ubiquitous connectivity will offer significant opportunities for both the military and the private sector, it will also present us with considerable security vulnerabilities that can be exploited at a global scale. To ensure that the DOD can continue to effectively operate anywhere and anytime, we want to collaborate with our partners in the private sector to adopt a deliberate strategy to identify and mitigate the security challenges that 5G will present. Ultimately we believe that the military that masters ubiquitous connectivity will maintain overmatch, and the mastery will require the ability to fully leverage its power for our mission while ensuring that we are able to spoil any attempts by our adversaries to use it against us.

So what is our plan? First, we have to accelerate the DOD's adoption of 5G. This means using at-scale test facilities to enable rapid experimentation and dual-use application prototyping. Specifically, we want to collaboratively experiment with industry to explore use cases that have both military and commercial relevance. Second, we have to operate through. American military forces must be able to conduct our mission wherever and whenever we are called upon to deploy, and we must assume that our adversaries will aggressively attack our networks and communications capabilities.

So we will develop dynamic spectrum utilization tools and methods that will allow us to access spectrum regardless of adversary attempts to deny us that access. And we will adopt a zero trust philosophy for how we architect our networks, both home and abroad. Third, we must innovate. 5G is not an end state. There is no finish line. Rather, our emphasis must be on a continual investment in the cutting edge of communications technologies that will take us from 5G to the next generations of mobile information technology, which we like to call NextG.

So we are going to adopt the crawl, walk, run approach and we're going to be rolling out use cases and test sites in tranches. And it's worth noting that for all of these cases that we explore, we will use red teams to ensure that we can identify and address vulnerabilities in the design and implementation of the approaches and fully stress test the prototypes. The draft RFP for our first tranche will include a description of four U.S. military installations where initial 5G testing and experimentation will take place. Our test sites will provide streamlined access to site spectrum bands, mature fiber and wireless infrastructure, access to key facilities, support for new or improved infrastructure requirements and the ability to conduct experiments in congested communications environments.

Now let me take a moment to briefly describe the first three use cases that we would like to explore. The first use case is augmented and virtual reality. So the DOD must conduct mission planning, rehearsal and training with as much realism as possible to maximize our operational readiness and effectiveness. 5G enabled augmented reality and virtual reality will provide us the ability to conduct these exercises with greater realism and lower cost than is currently possible. For our experiments, we want to demonstrate the integration of A.R. and V.R. into mission planning and training in both virtual and live environments on our training ranges. Ultimately mission training and planning that is more immersive and realistic will result in increased proficiency in the field, enhanced survivability and a greater likelihood of mission success.

Our second use case is smart warehouses. So the DOD manages one of the most complex and challenging logistics operations in the world. 5G technologies have the potential to streamline logistics processes and maximize throughput in warehouse operations well beyond what is currently possible. For example, 5G will greatly improve the control of IOT devices and autonomous robots, thereby enhancing safety as well as throughput. Furthermore, 5G will enable real time collection and analysis of data to ensure reliable asset and inventory management and improve detection of tamper activity, which will enhance the security as well as the efficiency of operations.

So ultimately, smart warehouse technology will make DOD logistics increasingly agile and effective, allowing persistent and reliable support to our global operations. Our third use case is dynamic spectrum sharing. And I know a lot of people have heard about this. This is a really important topic.

And I want to say this for the record. The DOD wants our American industry to lead in 5G. A strong American economy is vital to our national security. And we know that our industry partners understand that the DOD must be able to execute our mission, and that includes defending our homeland against determined, persistent and capable adversaries.

Now spectrum is a vital resource to both our industry and to the DOD. And the truth is that spectrum allocation has become a real challenge. The U.S. can no longer afford to perceive spectrum allocation as a zero sum game in which one user gives up spectrum to allow the other access. So it is time for us to work together to figure out how to implement true dynamic spectrum sharing. Recent success with CBRS gives us reason to believe that we can figure this out together. And DARPA's spectrum collaboration challenge, which is being highlighted here at MWC LA, is providing further proof of the art of the possible.

But there is still much work to be done. So we plan to establish a dynamic spectrum sharing test bed to demonstrate the capability to use 5G in congested environments with high power, mid-band radars. So what's our way ahead? We are going to issue our draft RFP in November through the National Spectrum Consortium. It is not too late to join the Consortium. They make it very easy to join if you're not yet a member. You can also participate as a sub to a member of the Consortium. Feedback provided to the draft RFP will inform the final RFP planned for December, although the timing will depend on the passage of a 2020 defense appropriations bill.

And contingent upon funds' availability, we intend to roll out our 5G program in stages or tranches with follow-on RFPs in fiscal year 2020. I want to emphasize that this will be a collaborative effort from the start. Collaboration with our innovative partners in industry and also with the FCC and TIA and many other government agencies. So the bottom line is that the DOD is all in on 5G. We firmly believe that the military that masters ubiquitous connectivity will maintain overmatch. We also believe that there is no finish line. We will never let up on our commitment to continuously innovate with our partners in the private sector as well as with our partners across the government.

And now it's my pleasure to introduce the two people whose organizations are true partners with us in the DOD in our efforts to accelerate American innovation in 5G, Chairman Pai and Administrator Rinaldo. I'll ask that you guys say a few words in our remaining time.

Thank you.

(APPLAUSE)

FCC CHAIRMAN AJIT V. PAI: Well, thank you so much, Dr. Porter, for that bold announcement. Thank you for the invitation to participate, and thank you for the leadership you have shown at the Department of Defense.

I would like to begin by congratulating Dr. Porter and her team at the Department of Defense on this 5G initiative. This is a model for smart innovation policy, working with partners inside and outside of government to encourage experimentation and to expand the realm of the possible when it comes to wireless throughputs and dynamic spectrum sharing and our 5G future generally. It is good for our nation's military, and it is good for the commercial sector, as well. I very much look forward to seeing what we learn

from DOD's four initial experimental sites, as well as the three use cases that Dr. Porter outlines.

Now, of course, I am hardly surprised that Dr. Porter's put forward such a smart and thoughtful plan. She has been an outstanding partner over the last couple of years, and I am proud to have such a dedicated and brilliant public servant as a collaborator, along with her team at the Department of Defense, to help seize the opportunities of wireless communications for the American people. Working together, we have already made meaningful progress on a number of fronts.

For example, in two months the FCC will auction spectrum in the upper 37, 39 and 47 GHz bands. By making available 3,400 MHz in three different bands, this will be the largest spectrum auction in American history.

But before holding this auction, we first need to resolve pending issues regarding the Pentagon's ability to use the upper 37 GHz band in limited circumstances. In partnership with DOD, we established a process that protects the interests of commercial licensees in that band, while accommodating the department's needs. That is a win for American leadership in 5G and a win for our nation's military.

In a couple of hours I will be attending a separate event to celebrate opening up the 3.5 GHz band which Dr. Porter alluded to for commercial use. For years, these airwaves have been used by the military, but DOD worked closely with the FCC and the NTIA to develop a dynamic spectrum system -- sharing system that protects incumbents while making 150 MHz of spectrum available for commercial activities. The issues here are quite complex, and I want to thank everybody at the Pentagon for working in good faith to resolve these issues in a mutually-agreeable way. Reaching compromise isn't always easy, but we reached an accommodation that worked for both sides.

And I believe that the main reason that we have been able to find solutions on these two particular issues is the spirit in -- with which the FCC and the Pentagon have approached our discussions. We recognize that at the end of the day, we are all on the same team, working towards the same goal: advancing the national interest of the United States. And as long as we remembered that our most important job is to further that objective instead of protecting agency turf, I'm optimistic about what we can accomplish together in the future.

So thank you again, Dr. Porter, for the partnership between the FCC, the NTIA and the Federal Communications Commission. Congratulations on today's announcement, and look forward to seeing from V.R. and A.R., to spectrum, to the smart warehouses, to dynamic spectrum sharing what the exciting future holds. Thank you very much.

OK. Thanks.

(APPLAUSE)

ACTING NTIA ADMINISTRATOR DIANE RINALDO: Thank you, Dr. Porter, for inviting me to join you today as the Department of Defense announces this strategic initiative. I'm delighted to be here on behalf of NTIA and the Department of Commerce.

For the administration, winning the race to 5G is our primary focus. It's imperative that our economic and national security continues to lead the world in wireless technologies, and we're doing that today. Everyone here likely knows the promises of 5G. The policies we've pursued enabled government and industry to work together to deliver on that promise. We've developed a long-term, comprehensive approach to spectrum policy. We've removed obstacles to infrastructure buildouts, and we've collaborated with industry to put security first. That's because just being first to 5G isn't enough. America's next-generation networks must be robust and secure.

The private sector will be leading the way, but we have developed a comprehensive, whole-of-government approach so that the private sector has the support it needs and the American people can get the maximum value from spectrum resources.

The U.S. government, of course, relies heavily on spectrum to serve the public. Today's announcement demonstrates that 5G will likely soon have a role in government missions. The initial applications that Dr. Porter mentions are just the tip of the iceberg. The programs in these testbeds are terrific example of how collaboration within government and the private sector are critical to achieving our national goals.

I look forward to monitoring its progress and to working together across all fronts to make sure that United States continues to be leading on 5G efforts. And again, I look forward to a long collaborative process between the Department of Defense and FCC, so thank you.

-END-