



**FILED VIA ECFS**

February 5, 2021

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
45 L Street NE  
Washington, DC 20510

Brian Hendricks  
Government Relations  
Nokia

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Re: *Notice of Ex Parte Presentation*, WC Docket Nos. 18-89 and 21-31

Dear Ms. Dortch:

On February 3, 2021, Brian Hendricks, Grace Koh, Jeffrey Marks, and Mimi Strobel of Nokia met via video conference with Acting Chairwoman Jessica Rosenworcel and her Acting Legal Advisor, Ethan Lucarelli. In the meeting, the Nokia representatives focused on recommendations to promote Open Radio Access Network (O-RAN) technology and to close the digital divide.

With respect to O-RAN, Nokia is a leading voice among network vendors with global scale. For years, we have driven the policy frameworks and technical specifications of O-RAN through our participation in the O-RAN Alliance, the Linux Foundation's ONAP initiative, ETSI's Multi-access Edge Computing (MEC) initiative, the Telecom Infra Project, the Open RAN Policy Coalition, and more. We are also active participants in multiple real-world deployments involving early stage open interfaces, giving Nokia hands-on experience deploying this network architecture. This experience provides Nokia a deep understanding of the benefits of O-RAN as well as the technology gaps and operational and implementation questions that must be addressed so that O-RAN reaches its potential to meet and exceed the performance of previous RAN deployments.

To encourage development of O-RAN, and increase carrier adoption of this network architecture more quickly, the Nokia representatives recommended that the U.S. government do more than fund basic research by investing in testbeds. Such testbeds can simulate real-world network deployment scenarios wherein issues like performance and security can be studied across the types of scenarios that will be encountered when O-RAN is introduced into previously

deployed, multi-generation networks. Many of our carrier customers want to see these issues, as well as complexities and costs related to integration, studied and tested. These issues can be addressed, and confidence enhanced, through multi-vendor test beds.

Nokia reiterated our opposition to technology mandates or any other mechanism where government chooses technology winners and losers, including preferences in procurement. The Commission made the correct decision in the case of the “rip and replace” program to indicate that O-RAN compliant equipment would be eligible for reimbursement while resisting calls to mandate or condition funding on selection of O-RAN compliant equipment.<sup>1</sup> We encourage the Commission to maintain this policy.

Also in the context of the “rip and replace” program, we renewed our recommendation that the Commission grant broad extensions of time to impacted carriers given the demands on qualified tower crews to complete ongoing 5G builds and other challenges unique to these deployments. The initial 12 months following the commencement of funding will be insufficient in most cases to complete remediation efforts. Therefore, the Commission should grant a blanket extension of time from the start so that program participants know in advance they have time to build a network based on prudent business and engineering determinations, rather than have those decisions overtaken by a 12-month time constraint.

Nokia next discussed the importance of closing the digital divide and how technology advances have enabled non-traditional service providers to reach into communities and fill gaps to connect the unconnected. The pandemic has led to unprecedented, intensive reliance on broadband to the home as the primary connection for work, school, healthcare, and to stay in touch with friends and family. In this environment, schools, libraries and other anchor institutions are seeking new ways to serve their communities. Nokia has worked with such institutions to enable affordable broadband solutions, for example, through robust community Wi-Fi and CBRS networks. We applaud Acting Commissioner Rosenworcel’s and Congress’s work to expand broadband deployment and make broadband to the home more affordable. In particular, we support the Commission’s latest effort to expand E-Rate to subsidize connectivity beyond the walls of a school or library.<sup>2</sup>

Nokia outlined several of our recommendations to address the digital divide, which we will also advocate to lawmakers and the Administration. These include the need for increased flexibility in funding programs. All technologies and business models capable of meeting the needs of those without reliable connectivity must be eligible. As is referenced above, entities that would not be considered Eligible Telecommunications Carriers (ETCs) are increasingly partnering with Nokia to enable affordable, broadband connectivity to their communities. A reimagination of key programs and practices in the efforts to promote connectivity and adoption is essential if we are to succeed in closing the digital divide.

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<sup>1</sup> *Protecting Against National Security Threats to the Communications Supply Chain Through FCC Programs*, Second Report and Order, WC Docket No. 18-89, FCC 20-176, ¶ 202 (rel. Dec. 11, 2020).

<sup>2</sup> *Wireline Competition Bureau Seeks Comment on Petitions for Emergency Relief to Allow the Use of E-Rate Funds to Support Remote Learning During the Covid-19 Pandemic*, Public Notice, WC Docket No. 21-31, DA 21-98 (rel. Feb. 1, 2021).

Please contact the undersigned with any questions in connection with this submission.

Respectfully submitted,

*/s/ Brian Hendricks*

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cc: Acting Chairwoman Jessica Rosenworcel  
Ethan Lucarelli, Acting Legal Advisor