

8 April 2016

**BY ELECTRONIC FILING**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

*Re: GN Docket No. 14-177, IB Docket No. 15-256, RM-11664, WT Docket No 10-112,  
IB Docket No. 97-95  
Notice of Ex Parte Presentation*

Dear Ms. Dortch:

Pursuant to 47 C.F.R § 1.1206(b), 5G Americas notifies the Commission of an *ex parte* presentation in the above-referenced proceeding. On April 6, 2016, Chris Pearson (5G Americas President), Stacey Black (AT&T), John Kuzin (Qualcomm), Gardner Foster (Sprint), John Hunter (T-Mobile USA), Joe Marx (AT&T), Chris Boyer (AT&T), Mary Brown (Cisco), Eric Wenger (Cisco), Peter Pitsch (Intel), Farid Adrangi (Intel), Soo Bum Lee (Qualcomm), Greg Schumacher (Sprint), Michael Mullinix, Susannah Larson, and Patricia Paoletta (HWG), as counsel for 5G Americas, met in person or telephonically with Jeffery Goldthorp, Ahmed Lahjouji, and Greg Intoccia of the Public Safety and Homeland Security Bureau; John Schauble of the Wireless Telecommunications Bureau; and Bahman Badipour of the Office of Engineering and Technology to discuss security of the fifth generation of mobile broadband (“5G”) and other services offered in millimeter wave spectrum, as it relates to the above-captioned proceedings. During the course of the meeting, points were made consistent with the attached, with members of 5G Americas noting the importance of security to the industry and the steps standards bodies such as 3GPP are taking to create security standards for 5G.

5G Americas President Chris Pearson noted to Commission officials that members have a commercial interest in ensuring the security of their services and products. 5G Americas explained that 5G standards are in the very early stages of development, and that the first phase of 5G standardization should be completed in the second half of 2018 and the final phase of 5G standardization should be completed by December of 2019. 5G Americas agreed with the Commission that support for security must be a fundamental component in the design of any new network architecture and protocols developed for mobile wireless services in all generations of

mobile broadband technologies including when using millimeter wave spectrum for 5G. 5G Americas noted that security had been a design component in third and fourth generations of mobile broadband technologies, and is increasingly required by its members' customers throughout the ecosystem. Security is now a market imperative, since security is vital to today's use cases, including the billions of Internet of Things (IoT) and connected devices in use around the globe.

5G Americas appreciates the Commission's concern that as new wireless applications are used by vertical sectors such as smart grids, telemedicine, industrial control, public safety, and automotive, those sectors will have strict security requirements that are mission critical. 5G Americas noted that because of those strict requirements, there are a number of standards development organizations (SDOs) and industry bodies that are developing security features specific to those vertical sectors. 5G security therefore spans multiple SDOs and other organizations. For example, for autonomous vehicles, the IEEE is working on security for DSRC. Likewise, the automobile OEMs are working on how to connect vehicles to the cloud. These numerous SDOs, made up of industry experts from each vertical sector, are poised to be the most effective in developing standards, and so are actually improving the vigor of security development across the 5G ecosystem.

5G Americas noted that even relative to mobile wireless networks, there are specific, varying requirements relating to the edge, the core, and the cloud, and assured the Commission that the industry is addressing each of these layers' need for security. Members of the association shared with the Commission activity underway in several working groups of 3GPP,<sup>1</sup> which is a consensus-based organization open to participation by stakeholders throughout the wireless ecosystem, and encouraged the Commission's involvement in that important mobile wireless forum. 5G Americas noted that its members are contributing to the work items on security today in 3GPP and other industry standards bodies. Subsequent to the in-person meeting, 5G Americas provided Commission officials in attendance specific references to the 3GPP work items on 5G networks, so that the Commission can monitor the 3GPP activities related to cybersecurity and contribute to the discussion as they deem appropriate.

Relative to mobile broadband networks, 5G Americas noted that U.S. mobile operators are already installing Software Defined Network and Network Function Virtualization technologies in their networks, which provide increased security to the network. In addition to security development with software technology, 5G Americas members are active in security development at the hardware level as well. Because there are a limited number of commercial entities involved in deploying mobile broadband networks in licensed spectrum, the development of security standards for 5G networks is a more manageable process than in some other sectors.

5G Americas agreed with the Commission that because technology is always evolving, industry must continue to evolve security measures to effectively manage a dynamic threat environment. The meeting closed with 5G Americas noting its interest in continuing the

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<sup>1</sup> Third Generation Partnership Project (3GPP) website is available at [www.3gpp.org](http://www.3gpp.org).

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dialogue with the Commission, as its members continue to engage in the development of security features for products and services in all generations of mobile wireless areas including when using millimeter wave spectrum for 5G.

Should you have any questions, please contact me by telephone at +1 202 730 1314 or by e-mail at [tpaoletta@hwglaw.com](mailto:tpaoletta@hwglaw.com).

Respectfully submitted,



Patricia Paoletta  
*Counsel for 5G Americas*

Attachment

cc: Jeffery Goldthorp  
Ahmed Lahjouji  
John Schauble  
Greg Intoccia  
Bahman Badipour