

strong proponent of the deployment of infrastructure that is necessary to provide the public with advanced wireless broadband services.

II. WAIVER REQUESTS

America's use of mobile broadband connectivity is growing exponentially. This increased demand for capacity-intensive access to the Internet is visible with the rapid growth of smartphone adoption. These devices are essentially handheld computers integrated with a mobile telephone, allowing consumers to use them in much the same manner as their home computers. With smartphones replacing feature phones, the growth in the smartphone universe is straining available wireless spectrum. In 2012, wireless subscribers for the first time spent more on data than they did on voice. Spending on data rose by a third in 2012, and in future years it will increase by 94 percent.

TIA projects that the overall wireless market, including voice and data services, wireless handsets, wireless infrastructure equipment, and services in support of the wireless infrastructure, will expand at a 7.6 percent compound annual rate., reaching an estimated \$364.5 billion in 2016 from \$272.3 billion in 2012.³ Innovation and growth have also gone well beyond the smartphones. Demand for bandwidth consuming devices such as netbooks and tablets are skyrocketing.

³ This data, as well as all other projections and statistics provided in this document which are not cited to otherwise, are derived from the TIA 2015 ICT Market Review & Forecast, a proprietary annual publication from TIA containing distilled data and analysis on information and communications technology industry trends and market forecasts through the end of 2018. This document is available for purchase at <http://www.tiaonline.org/resources/market-forecast>.

As the FCC has previously very succinctly stated in its NPRM addressing barriers to small cell deployment: “The ability of wireless providers to meet this demand will depend not only on access to spectrum, but also on the extent to which they can deploy new or improved wireless facilities or cell sites.”⁴ Small cell infrastructure deployments have the potential to expand the capacity of wireless networks.

In support of facilitating small cell deployment, TIA supports waiver requests from technical requirements contained in Section 101.115 of the Commission's rules unnecessarily limit equipment manufacturers from developing and deploying fixed microwave equipment in an effective and efficient manner. We note that the requirements for co-polar discrimination and cross-polar discrimination contained in Section 101.115 are more rigorous than applied to other fixed microwave bands and have stifled the ability of parties to fully utilize the 71-76/81-86 GHz bands.

As Aviat Networks explained, "Predicting future developments in technology is notoriously difficult. Even harder is predicting the ultimate uses of an emerging technology.....The Commission expected these bands would substitute for fiber-optic cable, a "virtual fiber"-i.e., extremely high capacity links between points that generate or consume large amounts of data- has failed to materialize to the extent the Commission anticipated, ten years ago.⁵

⁴ See, Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies WT Docket No. 13-32; WT Docket No. 13-238; WC Docket No. 11-59 (rel. September 26, 2013), at 2

⁵ See, Allocations and Service Rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands, Report and Order, 18 FCC Red 23318 at iii! 6-24 (2003). Aviat Networks reports that only about 5,500 links have been registered nationwide for these bands, plus 92-95 GHz, during the last decade.

As Radio Frequency Systems presented in its comment:

“The less-obtrusive appearance of small cells have the added benefit of filling coverage gaps and extending coverage to underserved areas without raising concerns regarding visual profile typically associated with larger communications installations. Easier antenna siting will translate to lower costs and quicker time to market, further benefiting the public interest. Conversely, the current rules are a substantial impediment to small cell deployment. Simply stated, it would be a huge disadvantage to small cell deployment if the small cell wireless access technology was dwarfed in size and weight by the accompanying wireless backhaul equipment.”⁶

As the Fixed Wireless Communications Coalition observed in support of the waiver requests:

“Over the same period of time, however, developing technologies and shifting patterns of wireless usage have created the need for small, light, esthetically inconspicuous antennas, particularly to provide backhaul to small-cell installations. The 71-76/81-86 GHz bands would be ideal for these applications, except that antennas complying with the present standards are too large in terms of size, weight, cost, and time needed to deploy.”⁷

TIA is likewise supportive of the application of similarly situated commenters, such as Aviat and Comsearch that they be included in the Request for Waiver that was filed with the Commission.⁸

⁶ See, Comment of Radio Frequency Systems, WT Docket No. 15-244 (filed Nov 12, 2015) at p. 2

⁷ See, *Ex parte filing* of the Fixed Wireless Communications Coalition WT Docket No. 15-244 (dated May 23, 2013, filed October 8, 2015) at p. 2 See, Comment of Comsearch, WT Docket No. 15-244 (filed Nov 12, 2015) “Comsearch strongly recommends that if the Commission grants the requested waiver relief, it should apply to all E-band licensees.” See also, Request for Waiver of Aviat Network WT Docket No. 15-244 (filed Oct 8, 2015).

III. CONCLUSION

For the foregoing reasons, TIA urges the Commission to act consistently with the recommendations above.

Respectfully submitted,

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