Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)
	)
Modernizing the E-rate	)
Program for Schools and Libraries	) WC Docket No. 13-184
	)

**COMMENTS OF PCIA – THE WIRELESS INFRASTRUCTURE ASSOCIATION AND
THE HETNET FORUM**

I.   INTRODUCTION

PCIA – The Wireless Infrastructure Association and The HetNet Forum, a membership

section of PCIA ("PCIA"),[1] respectfully submit these reply comments on behalf of their

members in response to the Federal Communications Commission's ("FCC" or "Commission")

March 6 Public Notice.[2] PCIA appreciates the opportunity to reiterate its support for the

Commission's efforts to modernize the E-rate program for schools and libraries.[3] Specifically,

the Commission should adopt a "whole network" approach which would speed the deployment

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[1] PCIA is the national trade association representing the wireless infrastructure industry. PCIA's members develop, own, manage, and operate towers, rooftop wireless sites, and other facilities for the provision of all types of wireless, telecommunications, and broadcasting services. PCIA and its members partner with communities across the nation to affect solutions for wireless infrastructure deployment that are responsive to the unique sensitivities and concerns of each community. The HetNet Forum, formerly The DAS Forum, is a membership section of PCIA dedicated to the advancement of heterogeneous wireless networks. Heterogeneous networks combine "macro," or large, infrastructure such as monopoles with small cells and distributed antenna systems. By integrating the two types of infrastructure together, carriers are able to target geographic areas to increase network capacity.

[2] Wireline Competition Bureau Seeks Focused Comment on E-Rate Modernization, WC Docket No. 13-184, Public Notice (rel. March 6, 2014) ("Public Notice").

[3] Comments of PCIA – The Wireless Infrastructure Association, WC Docket No. 13-184 (filed Sept. 16, 2013) ("PCIA Comments"); Reply Comments of PCIA – The Wireless Infrastructure Association, WC Docket No. 13-184 (filed Nov. 8, 2013).

of next-generation broadband networks and further support for off-site access to broadband for learning.

II.   DISCUSSION

Adopting a whole network approach to E-rate funding will best serve the Commission's goals to "focus E-rate funds on high-capacity broadband, especially high-speed Wi-Fi and internal connections."[4] A whole network approach enjoys broad support among commenters.[5] Such an approach would eliminate the priority system currently in place for E-rate and give schools and libraries the flexibility to address the most critical areas of need in their networks.[6] The following three examples illustrate how this approach will allow the E-rate program to maximize efficiencies in both deployment speed and cost relative to performance.

First, a whole network approach offers economic efficiencies that will allow the E-rate program to better use its scarce resources. As Microsoft's comments demonstrate, connecting a school or library to a larger broadband access pipe is not always the most economically efficient

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[4] Public Notice at ¶ 4.

[5] *See In re* Modernizing the E-rate Program for Schools and Libraries, *Notice of Proposed Rulemaking*, 28 FCC Rcd 11304, 11345 (2013) (citing Funds for Learning, USF for Schools and Libraries: FY 2013 and Beyond, CC Docket No. 02-6, at 4, 5 (filed Mar. 25, 2013)); *see, e.g.*, Comments of City of Boston, WC Docket No. 13-184, at 5-6 (filed Sept. 16, 2013) (recommending the Commission adopt a "whole network" approach); Comments of the Urban Libraries Council, WC Docket No. 13-184, at 6-8 (filed April 7, 2014) (arguing the Commission should eliminate the priority system for E-rate funding); Comments of Cisco Systems, Inc., WC Docket No. 13-184, at 7-8 (filed Sept. 16 2013) (highlighting that the interconnected nature of the wide area network and the local area network means all aspects of a network should receive equal priority for E-rate funding); Comments of Comcast Corporation, WC Docket No. 13-184, at 6-8 (filed April 7, 2014) (reiterating Comcast's support for a "whole network" approach); Comments of Microsoft Corporation, WC Docket No. 13-184, at 1-6 (filed April 7, 2014) (positing that eliminating the E-rate priority system will make the program more cost-effective) ("Microsoft Comments"); PCIA Comments at 4-7 (asserting that a "whole network" approach will offer greater flexibility and speed the deployment of advanced broadband networks).

[6] *See* Comments of Comcast Corporation, WC Docket No. 13-184, at 22 (filed Sept. 16, 2013).

way to improve broadband access.[7] For example, a caching server can greatly improve the efficiency of existing bandwidth and offer a more cost-effective solution to network access in an area with high marginal costs for additional bandwidth.[8] However, E-rate's current priority system would frustrate any attempt to timely take advantage of this efficient solution.

Second, a whole network approach would speed the deployment of next-generation broadband networks to schools and libraries. The current priority system is designed for a 20th century education model that focused on computer labs, school libraries, and other designated learning spaces. However, as educators consider new strategies to harness the ubiquity of mobile devices, E-rate's artificial priority system stymies the adoption of technologies that can best support mobile device-based learning. For example, a distributed antenna system ("DAS") can improve cellular service and support a private Wi-Fi system, potentially giving students access to multiple broadband networks.[9] Under E-rate's current priority system, however, deployment of DAS and other similar technologies is slowed due to their priority two status. The Commission should therefore adopt a whole network approach to facilitate the deployment of new, efficient technologies.

Finally, the Commission should support off-site broadband access for learning. More and more of today's students are mobile; as such, staying connected outside of the traditional classroom environment can enrich their learning experience. Support for off-site learning can immediately help narrow the "digital divide." Together with AT&T and Sprint, PCIA agrees that expenses associated with off-site mobile broadband connectivity should be eligible for E-rate

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[7] Microsoft Comments at 1-6.

[8] *Id.* at 3-5.

[9] PCIA Comments at 6.

funds.[10] Numerous pilot projects and studies have shown the positive impact of off-site broadband access on education.[11] Access to broadband is increasingly critical to students' success, and permitting reimbursement for off-site mobile broadband access would remove a significant barrier for students who do not have broadband access at home.[12] Therefore, the Commission should take advantage of existing wireless infrastructure to close the "digital divide" by using E-rate funds to reimburse expenses associated with off-site mobile broadband connectivity.

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[10] Comments of AT&T, WC Docket No. 13-184, at 7-8 (filed April 7, 2014) ("AT&T Comments"); Comments of Sprint Corporation, WC Docket No. 13-184, at 9-11 (filed Sept. 16, 2013) ("Sprint Comments").

[11] AT&T Comments at 8; Sprint Comments at 9-10.

[12] AT&T Comments at 7-8; Sprint Comments at 11.

III. CONCLUSION

For the foregoing reasons, PCIA urges the Commission to reform E-rate in a technology-neutral manner to support a whole network approach to funding, including support for internal networks.

Respectfully submitted,

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