

September 27, 2013

Ms. Marlene H. Dortch  
Secretary  
Federal Communication Commission  
445 12<sup>th</sup> Street SW  
Washington, DC 20554

Re: Notice of *Ex Parte* Communication, WC Docket No. 13-184

Dear Ms. Dortch:

On September 19, 2013, Sabrina Carson, E-Rate Coordinator for the Willamette Education Service District (ESD), Rob Naughton, Deputy Director of Technology Services for the Intermountain ESD, Cheri Rinhardt, Director of Information Technology for the Intermountain ESD, Carla Wade, Digital Learning Specialist for the Oregon Department of Education, Rick Wahlstrom, Chief Information Officer for the Cascade Technology Alliance (CTA), and Rachel Wenten-Chaney, Chief Information Officer for the High Desert ESD, (collectively, Oregon Technology Directors) spoke via telephone with James Bachtell, Soumitra Das, Charles Eberle, Alec MacDonnell, and Michael Steffen of the Wireline Competition Bureau. The purpose of the call was to discuss the experiences of Oregon ESDs and school districts in deploying high-speed broadband to schools and working with the E-rate program, the structure and benefits of ESDs, and to seek further input on the Commission's July 23, 2013 Notice of Proposed Rulemaking in the above-referenced docket. The Oregon Technology Directors provided the following information during the call:

- *Education Service Districts.* Oregon school districts are organized into ESDs, regional entities that provide programs and services to member school districts. Oregon currently has 19 ESDs. The Oregon Technology Directors explained that ESDs take individualized approaches to technology planning, funding, and infrastructure. Though savings on recurring telecommunications costs and equipment purchases vary, Ms. Wenten-Chaney explained that ESDs are consistently able to save money on personnel by hiring technology staff to cover multiple districts. She estimated that sharing technology staff saves individual districts approximately \$250,000 annually.

High Desert ESD has a shared WAN connecting 18 schools and 17,000 students. High Desert purchases a 110 Mbps Internet access connection for \$2800/month and also purchases 20 Mbps from the University of Oregon's shared network for \$600/month. The ESD leases fiber for its WAN. Two districts within the ESD own fiber that was deployed in partnership with real estate developments. Districts in the High Desert ESD that lease fiber pay anywhere from \$400 to \$1,000 per month, whereas districts that own their own fiber pay \$400-\$600 per quarter for maintenance. Ms. Wenten-Chaney said that

many districts prefer to lease fiber rather than own because leasing lowers risks posed by outages and repairs, changes in technology, and replacement at the end of the fiber's lifespan.

The CTA, a consortium of four ESDs serving 200,000 students, also shares technology staff and purchases WAN transit as a consortium but leaves last mile costs to each individual school district. CTA purchases two 1 Gbps pipes between Portland and Salem and an additional 1 Gbps pipe to the Northwest Regional ESD. CTA's member districts are connected to a 10 Gbps WAN. Mr. Wahlstrom noted that CTA plans for bandwidth demand to double annually.

Intermountain ESD files a single consortium E-rate application for Internet access service for 18 districts and individual districts pay for last mile costs. Ms. Rinhardt stated that the ESD's size enables it to take advantage of considerable economies of scale when purchasing Internet access. Intermountain purchases a 500 Mbps Internet access connection and has 45 Mbps aggregation points throughout the ESD. Intermountain includes many very remote districts, and connection speeds vary from T-1 lines up to 1 Gbps. In remote Malheur County, for example, a single T-1 connection costs \$1,000/month.

Willamette ESD covers a smaller geographic area that is more densely populated. Internet access speeds among member districts vary from 5 Mbps to 100 Mbps depending on geography and demand. A small number of geographically isolated schools within the ESD recently upgraded from T-1 lines, and others rely on fixed wireless technology for Internet access.

- *WiFi*. All ESDs on the call were committing resources to deploying WiFi networks. High Desert has an all Cisco WiFi network and purchases 11 and 12 series single radio wireless access points (WAPs). High Desert is close to achieving full WiFi coverage in all schools. Intermountain purchases mostly Cisco 802.11n WAPs that cost approximately \$500 each plus cabling and installation. Ms. Wentz-Chaney described Intermountain's WiFi coverage as "80% casual WiFi," meaning that nearly all buildings have WiFi service that is often limited to three to four hotspots. She explained that schools have seen an influx of devices and that many schools have a goal of providing WiFi coverage sufficient to support one-to-one devices and/or bring your own device (BYOD) but that for many schools the fiber connection is not sufficient to support that level of traffic. CTA has fiber connections to all schools sufficient to support one-to-one devices, but increased BYOD is putting stress on CTA's WiFi networks. CTA purchases less expensive 11 series WAPs for approximately \$80 each and typically deploys one WAP per classroom, but this coverage is insufficient for full BYOD. Ms. Carson noted

that Willamette's WiFi deployment has been hampered by the fact that the ESD has not received significant Priority 2 E-rate support.

- *Cloud services.* High Desert is interested in cloud services for backup, restoration, and disaster preparedness. The ESD is in discussions with vendors but recognizes that it may not currently have the bandwidth capacity to fully utilize these services. High Desert also uses instructional cloud services such as e-books and Google apps. They do not have a separate caching server, but instead rely on caching provided by Bend Broadband.
  
- *Misc*
  - In advance of the conference call, Ms. Wade provided the attached memorandum detailing many of the challenges that Oregon school districts face in delivering high-speed broadband.
  - Mr. Wahlstrom recommended increased funding for dark fiber, including fiber installed by public entities.
  - Ms. Carson asked FCC staff to re-examine limits on installation charges, explaining that remote districts often face very high installation charges.
  - Ms. Wade emphasized that bandwidth demand is doubling annually, and that schools are facing pressure to meet growing demand.
  - Ms. Rinhardt suggested that the FCC amend Form 470 to permit more multi-year contracts, which are more efficient from the districts' perspective. All of the Oregon Technology Directors supported this suggestion.
  - Ms. Carson suggested eliminating Form 486 because all information on the form is certified elsewhere, completing the form is burdensome for smaller districts, and missing the Form 486 deadline can delay support.

Respectfully submitted,

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Charles Eberle

Attorney-Adviser, Telecommunications Access Policy Division, Wireline Competition Bureau