Before the Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Lifeline and Link Up Reform and Modernization	)	WC Docket No. 11-42
	)	

Comments of the Consortium for School Networking

On August 25, 2015, the Consortium for School Networking (CoSN) filed comments in this proceeding expressing strong support for the Federal Communications Commission's proposal to use the Lifeline program as a tool for expanding home broadband access for students and their families. We are writing today to supplement our filing with high-level information about students' out-of-school data usage. While this complicated issue will require significantly greater study and exploration, we hope this information offers some preliminary insights into student data usage patterns when they are not in school.

Although most school districts are not proactively working to provide home based access to broadband for learning, discrete efforts are underway. Some school systems provide mobile hot spots that can be "checked out" to low income families, while other systems focus on delivering subsidized at-home broadband to families through fiber-to-the-home initiatives or "Connect-to-Compete" offerings. These strategies raise questions about how much bandwidth students require for learning and about how to identify and implement policies designed to limit access to data heavy activities typically unrelated to education.

Industry data shows that consumer video services constitute a large portion of mobile data consumption. For example, Ericsson found that 61% of commercial mobile app traffic is from Facebook, YouTube, Netflix, Instagram, and Snapchat. Some districts address this particular challenge by implementing acceptable use policies and practice that block consumer video services, but allowing education video services, such as TeacherTube, SchoolTube, YouTube for Schools, Kahn Academy, TedEd, and PBS Learning Material. Such policies, however, do not ensure consistent data usage patterns. Legitimate educator and student data practices often vary significantly based on variables such as whether the student is part of a Virtual Learning program that is heavily reliant on videoconferences, the length of time students spend online (e.g., a fully virtual student, or a hospitalized student may be online during normal in-school hours), and technical differences between devices and software applications.

CoSN member, Kajeet, offers Managed Education Broadband (MEB) that provides one illustration of this variation. Kajeet's MEB service, which involves thousands of students across 28 states and over 100 school districts, averages 1GB per month, per student. This level varies based on the policies schools establish for how, when, and what students may do with the connectivity provided through the service. For example, districts who have switched from environments which tailor the off-campus use for educational purposes, have seen as much as

a 3x-5x reduction in average data usage, primarily from the careful management of consumer entertainment uses.

Miami Dade offers another example. Miami Dade Public Schools offers school lunch eligible students Sprint's ConnectEd offering. The Sprint broadband service (Spark) is available to 50,000 low-income families from now through June 30, 2019. This 3GB per month offering is only available for eligible students living in territory served by Sprint and offered for four years of service once activated. The school district and/or family must provide the device, and once the 3GB limit is hit that month, you cannot add additional data on that device and the connection is throttled back to be very slow. According to district leaders, the 3GB limit has not been a major problem because home access flows through the district's filter. Concerns have been raised within the district, however, about situations where other family members connect to the device and compromise the primary student's usage. District leaders also noted that their students independently help mitigate data consumption, by often seeking free WiFi from restaurants and retailers to download bandwidth intensive apps.

Other school districts, such as Pontiac School District, in Pontiac MI, use filtered mobile hotspots with the sort of managed service provided by Kajeet, which allow them to manage the number of devices they need and the number of months they need them, without any overage charges. This type of data tracking, through a managed service, is key for districts that want predictable fees. The following table, provided by Kajeet, offers additional insight into possible typical student data consumption rates.

Kajeet Data Consumption Calculator

Daily data limit (maximum allotment) per device	500	MBs					
Data Consumption Chart: Kajeet Managed Education Broadband							
Activity	**Average Data Consumption**			**Daily Maximum Allotment**		**Monthly Maximum Allotment**	
				500	MBs per device	14.8	GBs per device
Email (text)	35	KB	ea.	14,629		444,709	
Email (text) with average size attachment	350	KB	ea.	1,463		44,471	
Typical education webpage	500	KB	ea.	1,024		31,130	
SD (480p) Education Video Streaming (e.g. Khan Academy, PBS, Discovery Education)	330	MB	hr.	91	minutes	2,764	minutes
HD (720p) Education Video Streaming	515	MB	hr.	58	minutes	1,771	minutes

Social Media (e.g. Facebook, Twitter, flickr, Pinrest)	500	KB	post	Blocked for K-8 filter as default	Blocked for K-8 filter as default
Online Gaming	60	MB	hr.	Non-educational: blocked	
Streaming Audio Entertainment/Music (e.g. Pandora)	60	MB	hr.	Non-educational: blocked	
Video Calling (e.g. Skype)	720	MB	hr.	Non-educational: blocked	
HD (1080p) Entertainment Video Streaming (e.g. YouTube, Netflix, Hulu)	1-4	GB	hr.	Non-educational: blocked	

While significant additional research will be needed to better understand students' out-of-school data consumption rates and practices, we urge the Commission to carefully consider the district experiences described above as well as the high-level information compiled by Kajeet through the company's users.

Respectfully submitted,

Consortium for School Networking (CoSN)

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