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**Comments on GN Docket No. 09-51.**

**June 1, 2009**

**Marlene H. Dortch  
Office of the Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street S.W.  
Suite TW-A325  
Washington, D.C. 20554**

**RE: GN Docket No. 09-51**

**Comments of the Alaska E-rate Coordinator for Schools and Libraries for the State of Alaska**

**Dear Ms. Dortch:**

**Attached are the Comments of the Alaska E-Rate Coordinator, filed electronically in response to the Federal Communications Commission's April 8, 2009 public notice in GN Docket 09-51 in the matter of a National Broadband Plan For Our Future.**

**Sincerely,**

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**Valerie Oliver  
Alaska E-Rate Coordinator  
Alaska State Library Division  
Alaska Department of Education and Early Development**

## Comments of the Alaska E-Rate Coordinator's Office

This office recognizes the unique position we are currently in as a result of the American Recovery and Reinvestment Act of 2009 Pub. L. No. 111-5, 123 Stat. 115) signed into law on February 17, 2009. For the first time, Alaskan's stand a real chance of achieving - at least in part - the broadband realities which are commonplace in the much of the United States. Broadband, as a business case, has been limited in Alaska because of the vast geographic distances and limited terrestrial infrastructure within the state. Affordable broadband is the exception, rather than the norm in the majority of Alaska and, were it not for assistance from the Universal Service Fund (USF) Alaska might all but cease to exist on any conceivable national broadband map.

While this office does not feel qualified to respond to all areas of this notice, we offer to you comments on those sections which we feel insightful suggestion is appropriate and can be made to further assist the Commission with their plan.

Comments below are for USF section III. C 3 #39 through 41

### **3. USF**

*39. We seek comment on the impact of broadband on our existing universal service programs, and how we should conduct our analysis of the High-Cost, Schools and Libraries, Rural Health Care (including the Rural Health Care Pilot program), and Low-Income programs. Specifically, for each program, we seek comment on the program's effectiveness and efficiency as a mechanism to help achieve national broadband goals.<sup>48</sup> Further, we seek comment on what modifications to these programs, if any, should be considered as a part of a national broadband plan. We seek comment on how these programs might be better targeted to address broadband deployment, particularly because these programs treat the support of broadband differently. Although the High-Cost program does not explicitly support the provision of broadband, as do the Schools and Libraries and Rural Health Care programs, a carrier providing broadband services indirectly receives the benefits of high-cost universal service support when its network provides both the supported voice services and broadband services.*

The Universal Service Fund and, more specifically, the E-rate program is the single most important factor in the presence of broadband within Alaska's rural communities. With the exception of Anchorage, all of

Alaska's communities are considered rural under USF. Most communities in Alaska are villages with populations of less than 500 people. USF makes it possible to bring broadband to the schools and libraries of these communities but that connectivity has yet to reach the homes within those communities. It is our sincere wish that the USF program and the ARRA broadband initiatives will look for ways that these programs might be complementary and supportive of one another. While 12 years of USF has driven a successful build out to the schools and libraries of our communities, the new broadband initiatives may well use the lessons learned from this successful program and extend the reach of broadband further - into the residences of these communities. Because the E-rate program has been so instrumental in allowing our local communities to at least have broadband access in the schools, we hesitate to recommend program modifications that might jeopardize this vital support mechanism. We do recognize, however, that an opportunity exists to build upon, even temporarily, this program and to make eligible entities that are not currently eligible under the existing programs.

*40. In particular, we seek comment on the impact of broadband stimulus funds on the Commission's broader efforts to reform the distribution of high-cost support and the collection of universal service contributions. To the extent that financial support is necessary to ensure that adequate broadband is available in high-cost deployment areas, including those currently unserved or underserved, how do we most effectively address this need? Are there opportunities to leverage the stimulus program funds and universal service funds to maximize broadband deployment, and at the same time prevent "double dipping"? To what extent will broadband deployment require continued funding for operations and maintenance?*

We expect and encourage the Commission to continue to look at contributors to the USF. Currently telecommunications carriers are shouldering the burden of support, while other major fund recipients receive benefits without contributing. In order to continue to reach the unserved and underserved, fund contributions need to be an ongoing assessment. The technologies of today will yield to more effective technologies of tomorrow. The Commission is encouraged to revisit the issue of fund contributors and disbursement recipients to strike a better balance by requiring contributions from all communication carriers, no matter the mode of communication in the future.

To the extent that applicants may be tempted to "double dip", in some instances accessing funding from multiple sources may be the only way that

some organizations can achieve broadband capability. We hesitate to encourage any blanket restrictions on utilization of more than one funding stream if, to do so, means entities continue to lack adequate funding for achievement of broadband goals. In many instances, it is the basic infrastructure which is lacking. Most Alaska communities are entirely off the grid, whether that is the electrical grid, the energy grid, or the road system. This lack of basic infrastructure is often the one time expense that has prohibited individuals or organizations from participating in otherwise viable broadband access.

Broadband deployment will undoubtedly generate ongoing maintenance costs; however the act of bringing broadband to an area will create a customer base that will make associated maintenance costs affordable. In Alaska, current Internet infrastructure consists primarily of satellite earth stations and the build-out cost of terrestrial broadband alternatives to communities has been a prohibitive factor for more than a decade while associated future maintenance is a given on-going cost, the initial cost of terrestrial broadband facilities remains the major obstacle to wide-spread migration off of satellites to more cost effective broadband delivery technologies such as microwave and fiber. Costs for what little internet connectivity we currently have are extremely high: library costs per megabit of bandwidth range from a low of \$50 per megabit per month in major urban areas to as high as \$2,350 per megabit per month. A dedicated T-1 connection can sometimes cost over \$10,000 per month. Because most bandwidth is delivered via satellite, low connection speeds, latency, and jitter are a constant battle. Service providers and their customers are prepared for the maintenance and fees associated with the cost of internet. It is the cost of the instillation of these networks themselves that is the greatest obstacle that we face. In many situations, due to vast geographical distances, terrestrial internet connectivity may never be a possibility, but corridors of terrestrial connectivity to the communities in coastal regions and interior hub communities, once established, will be largely self supporting as a business case.

***41. Should we modify existing universal service programs? For example, should we make broadband a “supported service” eligible to receive support directly from the High-Cost and Low-Income programs? Should we create new programs specifically to provide broadband support? Should such programs be designed around the delivery of broadband? What policies or mechanism do we use to prioritize funding in an efficient manner? For instance, should unserved areas get priority? Should multiple providers in an area get support? Should we give priority to funding the construction of networks, or***

*is ongoing support for operations and maintenance essential? If we create new programs, should these programs replace the existing programs or supplement them? If broadband services become eligible to receive high-cost and low-income support, should we also require contributions to universal service from broadband providers? What effect would such a requirement have on the economics of broadband deployment? What effect would including broadband as a supported service have on the size of the universal service fund, and on contribution requirements?*

Priority should be given to the funding of the construction of networks that can be shared by multiple service providers. Ongoing maintenance and operations of those networks will be essential, but it is the build out of the network itself that a community or region lacks the ability to fund. Once a network has been established, a business model will take over in which the providers in an area share the responsibility with the consumer to arrive at a competitive pricing scheme that supports the network's operations and maintenance. Funding from the High-Cost program should include broadband support, should those companies eventually pay into the fund.

Elimination of existing programs would have a destabilizing effect, counterproductive to the ARRA goals. New programs should be of a supplemental nature, augmenting and building upon existing programs where possible.

Comments below address Education Section III F 7 #88 through 93

## **7. Education**

*88. The Recovery Act directs the Commission to include in its national broadband plan "a plan for use of broadband infrastructure and services in advancing . . . education." 130 We seek comment on how to interpret and implement this portion of the Act.*

The most logical interpretation of this directive is a clear mandate to continue USF support of schools via the E-rate program. In Alaska the E-rate support mechanism has allowed schools to be the first and only place in most of our rural communities where true broadband exists. Under the 12 years of the USF program there has been no adjustment of the \$2.25 billion spending cap on the E-rate program. Upward adjustment of this cap is timely and necessary so that continued funds will be available to support infrastructure within the Schools and Libraries portion of the fund. As inflation has eaten away at the stagnant cap, less and less of the E-rate program funds have been available for Internal Connections, i.e. infrastructure support. Raising the Schools and Libraries (E-rate) funding

cap will allow an existing program, with mechanisms already in place, to achieve this ARRA directive.

*89. It has been said that education is the key to our future economic success. What role can broadband play in boosting the quality of American schools? Can the availability of broadband be used to encourage more technology partnerships between schools and businesses? In what ways does broadband access allow children and adults with disabilities to participate more fully in school and other educational activities? What is the role of this country's libraries in marshaling broadband access to advance education?*

*What role can broadband play in boosting the quality of American schools?*

The presence of broadband is key in today's high stakes No Child Left Behind education mandates. In small rural settings it is often impossible for a district to retain teachers highly qualified in all subjects. It is a delicate balancing act to attract and retain teachers that can deliver instruction in all of the core subjects, let alone the electives that provide for a well rounded graduate. In rural settings this balancing act becomes impossible and, were it not for distance delivery via broadband connectivity, rural schools and their students would be relegated to a third world education. Broadband is vital to rural communities if their high school students are to avail themselves of quality coursework such as chemistry, calculus, philosophy, and other specialized offerings that their urban counterparts enjoy. The generalist teacher of a single K-12 school, 4-8 teacher community is all too common in rural Alaska and the "highly qualified" mandates of No Child Left Behind are impossible to achieve without remote instruction availability.

*In what ways does broadband access allow children and adults with disabilities to participate more fully in school and other educational activities?*

Distance delivery allows for specialist teachers and Educational Service Agencies to interact with, provide assessments of, and share strategies for students of special needs. It is often impossible to provide the specialized support necessary for a student of unique cognitive or physical needs in a one school community. Having the capability of interactive distance delivery allows special needs students to remain in their home villages and receive the services that their peers in urban settings take for granted. While it is not the perfect solution to a complex issue, it makes possible a standard

level of individualized attention to, and monitoring of, students with special needs.

*Can the availability of broadband be used to encourage more technology partnerships between schools and businesses?*

Partnerships with service providers are a very real possibility in the area of education. Currently in Alaska our largest telecom provider has partnered with the University of Alaska post secondary system to provide the bandwidth necessary to support I2 connectivity for schools and libraries which can afford the “last mile” connection to one of three major University campus locations. Certainly our service providers in Alaska are very interested in partnering with the educational community and if incentives were available to help build out the broadband networks their educational communities are asking for, they would be willing partners.

Rural schools, through USF support, do currently have access to broadband speeds that support distance education; however, as previously mentioned, Alaska currently relies heavily on Satellite Earth Station connectivity which carries with it associated jitter and latency issues. USF support currently funds this connectivity but does not support the build-out of terrestrial networks over wide geographic distances, and Alaskans find this to be a point of weakness in USF support mechanisms. To date, the High Cost USF mechanism has done little to accelerate the build out of terrestrial networks that are lacking in rural areas. While the Schools and Libraries USF support mechanism pays for connectivity, often the only broadband service type providers are willing to deploy reflect the economic model that is in their best interest. We do not have the economy of scale that would justify instillation of the terrestrial networks that most of the rest of the nation take for granted, and, unfortunately, we actually have an economy of scope that discourages such deployments. Without support and encouragement from an outside funding source, quality videoconferencing capability, which comes only with terrestrial connectivity, is still an elusive capability for most of Alaska’s schools and libraries.

*What is the role of this country’s libraries in marshaling broadband access to advance education?*

Libraries serve the communities in which they reside and part of the mission of most libraries is to provide the information needs of their local community. Today, more than at any time in recent history, libraries serve as links to career information, job searches, and adult education. There are

over 100 public libraries in Alaska, but over 500 public schools. Perhaps the biggest flaw in the Schools and Libraries USF support mechanism is that it does not currently allow schools to utilize their bandwidth to support adult education activities. In many communities there is no higher education and/or adult education facility or organization, nor is there a public library. The schools are the only link those communities have between work force training and despair. Currently post secondary students are ineligible entities under USF support. If communities with no post secondary educational institutions were allowed to use the bandwidth of their local libraries and their associated USF support for adult education, it would be a tremendous boon to these communities. Schools and libraries would then be both allowed to function as a vocational center for their communities and these public institutions not have to refuse library activities that are in their community's best interests.

90. *How can a broadband plan maximize the benefits that our nation can derive from distance learning?*

The biggest boon to distance learning today is the USF Schools and Libraries support mechanism. A close and careful look at program improvements, including raising the current program annual funding cap and ensuring the financial health of that program, is perhaps the single most important thing a national broadband plan could do to maximize the benefits of this program. Providing incentives to service providers through the High Cost USF support mechanism to construct regional broadband networks would allow the Commission to taking an existing program and modify it to specifically address broadband networks and their educational functionality.

*Are the potential benefits greater in, and should our attention be focused more on, any particular scholastic level, such as grade school, middle school, high school or college?*

It is divisive and counterproductive to stipulate that attention should be focused on one level of education over another. It would better suit the Commissions' task at hand to look at which levels of education are currently being under funded at present and then build a plan that strives to strike a balance from that understanding.

*Should resources be directed more toward institutions or student locations? Does the potential to take online courses and earn a degree from a remote location increase the chances that people will earn a degree?*

Resources should be prioritized and directed toward communities in which no current educational opportunity exists. Rural America, rather than urban America has the disadvantage of limited access to distance learning, and this is independent of the level of education you are looking at. Prioritizing funding distribution for unserved geographic locations before underserved can be applied just as effectively in this situation as it can in general broadband access situations. Underserved areas would then be given the next priority before supporting those areas that already have broadband access available to the educational community.

*What are the benefits of teaching media literacy to students of all ages so they can better utilize the information they receive?*

Teaching our students to be effective users of information is the difference between reading to someone rather than teaching them to read themselves. Today's information explosion makes it vital that students have the ability to filter and evaluate the information that is at their fingertips. With information being pushed digitally toward them, and lacking the ability to sort through what they find and edit for usefulness and validity, students of today can metaphorically drown in a sea of information.

As educational funding has dwindled in many places, school media centers have been on the chopping block across the nation. Currently in Alaska only 2 school districts, or 4% of the districts, currently media centers with trained staff. As technology and the information explosion leap forward, too often we are not providing our students with the instruction necessary to evaluate and select between the abundance of information at their fingertips.

The State of Alaska participated in a statewide study of the effectiveness of the school library Media Center (*Information Empowered*, Keith Curry Lance, 1999. <http://www.library.state.ak.us/dev/infoemp.html> ). The results of this study showed a striking correlation between a library media center and student achievement. Many other states have repeated this study before and since 1992 ([www.laurabushfoundation.org/Lance.pdf](http://www.laurabushfoundation.org/Lance.pdf)) and the results have consistently shown that the presence of a library media center is a direct predictor of reading scores. Indirect predictors of overall student achievement also include the presence of a trained Library Media Specialist who plays an instructional role. This series of studies, along with

others over the past two decades, provides us with clear, consistent, and convincing evidence that media literacy matters when it comes to student achievement.

*91. In recent years, broadband access has allowed schools, parents, teachers and students to communicate and share valuable information online. How many parents, teachers and students are missing out on these benefits because of a lack of computers, computer literacy, or access to broadband?*

*What other barriers are there to bringing the benefits of broadband into the classroom, and what can be done about them?*

There is a striking disparity in Alaska between the online access that students have at school and at home. While the USF support mechanism has provided students with classroom/at-school access there is not the same support for home usage. While students and teachers have a relatively rate of broadband connectivity, there is a break in the digital communication between school and home. Affordability is the limiting factor for rural homes. Large geographic distances, lack of a sound business model for service providers and a lack of subsidized support make broadband to the home unaffordable to most Alaskans not on a road system.

Currently, the biggest barrier to bringing true broadband (1.5Mb/s or better with low jitter/latency) in the State of Alaska is the lack of terrestrial connectivity. We are dependent upon Satellite Earth Station connectivity in many areas, and it has yet to make business sense to our service providers to install the type of reliable network that would bring true broadband to our remote regions.

*92. The Commission's E-rate program helps schools and libraries obtain affordable telecommunications, Internet access and internal connections by providing discounts on eligible equipment and services.<sup>131</sup> We seek comment on how this program fits into a national broadband plan. Does the Commission need additional data on the broadband needs of schools and libraries or on the services currently being supported in order to best determine how E-rate would fit into a national plan? If so, how should this data be collected?*

The USF E-rate program is the foundation upon which the national broadband plan's educational component should be built. This office believes that the Commission, through USAC, should have the data necessary at this time to provide a picture of what broadband connectivity is currently being utilized across the nation in schools and libraries. The Commission is encouraged to look at states and eligible institutions that

currently are not participating in the E-rate program to identify for why underutilization of the USF support mechanism is occurring in these instances.

III F 8 #94

## **8. Worker Training**

*94. The Recovery Act directs the Commission to include in its national broadband plan “a plan for use of broadband infrastructure and services in advancing . . . worker training.”<sup>132</sup> We seek comment on how to interpret and implement this portion of the Act. For example, how can American workers use broadband to increase their workplace effectiveness, both for training and on a daily basis? How can access to broadband be utilized by citizens; state, local, tribal, and federal governmental agencies; and educational institutions, among others, to enable worker training in preparation for employment, including when workers are laid off, between jobs, or preparing to re-enter the workforce after a number of years? We also seek comment on how we can work with the Department of Labor to maximize the positive impact that a national broadband plan would have on the Department of Labor’s initiatives. How could we work with the Department of Labor or other organizations to ensure that the American worker benefits from increased broadband access?*

Allowing rural public schools, in addition to libraries, to utilize the bandwidth subsidized by the USF Schools and Libraries program for adult education and job training would be a logical extension of an existing program that would have positive impact on the employment availability to out of work Americans. Communities that otherwise lack broadband access for purposes adult education should be given a waiver so that adult education offerings can be delivered through their local public schools in the evening and would not have to be cost allocated out of the USF funding stream.