



Educational Excellence

Monte Vista School District

345 East Prospect Avenue
Monte Vista, CO 81144
(719) 852-5996
FAX (719)852-6184
<http://www.monte.k12.co.us>

Mr. Dwayne K. Newman
Superintendent

Off Premises Connectivity and Equity for Rural Learners

A Proposal for Participation in the E-rate Deployed
Ubiquitously 2011 Pilot Program

EDU 2011 – WC Docket No. 10-222
December 16, 2010

Applicant: Monte Vista School District
Address: 345 East Prospect Ave.
Monte Vista, CO 81144

Contacts: Linda Hinton or Dirk Oden
719.852.2212 ext. 18
(Fax) 719.852.6184
lindah@monte.k12.co.us

ABSTRACT

The Monte Vista School District is in the middle of the San Luis Valley in a rural area of south central Colorado. 19.6% of the San Luis Valley's residents live below the poverty line, and 26.8% of the Valley's children live in poverty. The per capita income in the San Luis Valley is \$15,180 compared to \$24,049 for Colorado as a whole. As a result, the highest poverty rates in Colorado are in the San Luis Valley and the northern urban core.

The Monte Vista School District is utilizing a number of research-based strategies to meet the needs of the community's students. Educational best practices show that differentiating instruction is essential to meet students' individual learning needs and increasing student engagement helps promote overall student achievement. The District is utilizing podcasting (video-based lessons linked through the Internet) in an effort to achieve both of these strategies. Unfortunately, these strategies are even more difficult to implement in a rural, high poverty community. Children growing up in poverty have very limited access to books and educational technology in the home. An additional challenge for San Luis Valley residents is the isolated rural location. The Valley poor have much fewer options and educational resources available to them than the urban poor. Connectivity to the educational resources of the World Wide Web is expensive and availability is limited. Many students do not have Internet access in their homes because of the expense and the issues with rural connectivity. While the podcasting initiative has demonstrated much encouraging success, students with home Internet access are at a distinct advantage.

The Monte Vista School District also operates two special schools; the Byron Syring DELTA Center and On-Line Academy are sister programs that share a common staff and curriculum. The On-Line Academy (OLA) is a free, accredited, public online school offering 6th through 12th grade students anywhere in Colorado a rigorous standards-based curriculum taught by highly qualified and experienced teachers. The first online school in the state, OLA has been meeting the educational needs of students whose particular situations preclude the traditional public school setting for nearly fifteen years. Students enroll in a challenging instructional program, which accommodates individual student needs while providing a quality education. A significant proportion of students completing their high school educational program through OLA continue their formal education through college attendance. OLA provides each student with a netbook with an internal 3G broadband modem to access the school's website and courses. Students need to be on the Internet to complete their course work and to communicate with their teachers. Providing each student with a computer with built-in broadband access ensures equity – students are able to participate in the program based on their educational needs alone, and not on whether they have Internet access in their home.

The Byron Syring DELTA Center is designated as an Alternative Education Campus by the Colorado Department of Education. To meet this designation, 95% of the enrolled students are highly at-risk. The DELTA Center provides an individualized program to students in difficult circumstances (drop-out retrievals, adjudicated students, teen parents, etc.) working towards a high school diploma or General Equivalency Diploma. Students work under the direction of a teacher-advisor who teaches the classes in his or her content area and helps his or her advisees with academic goal setting and progress monitoring. Although students are expected to attend school and work onsite, those with a computer and Internet availability can access their classes from home after school and on weekends and when difficult circumstances preclude daily attendance. A very limited number of netbooks with built-in 3G broadband Internet access are available for overnight/weekend checkout, but the demand far exceeds the supply due to budget limitations on broadband Internet subscriptions.

Participation in this pilot program by providing funding assistance for Internet access through 3G broadband netbooks would offer students greater access equity and would lead to greater opportunities for academic growth and future success through the district-wide podcasting initiative and DELTA Center alternative school program, and would allow continued success for the On-Line Academy program.

**Off Premises Connectivity and Equity for Rural Learners
EDU 2100 Pilot Program – WC Docket No. 10-222**

Applicant Wireless Program Description

Legal Name of Organization: Monte Vista School District C-8

Mailing Address: 345 East Prospect Ave.

City: Monte Vista

State: CO

Zip: 81144

County: Rio Grande

Telephone: 719-852-2212

Fax: 719-852-6184

Contact Names: Linda Hinton or Dirk Oden

Contact Email Address: lindah@monte.k12.co.us

Name of Director: Dwayne Newman

Organization Vision: To achieve educational excellence by preparing students, parents, staff, and community members for the future.

Organization Mission: To build a safe, student focused, achievement oriented learning community for Everyone.

1a) The nature of the Applicant Wireless Program including the extent to which the use of connectivity is interactive and utilizes the Internet.

The Monte Vista School District has always been a leader in the use of technology as an important tool in meeting the educational needs of the district's students, more than two-thirds of whom are economically disadvantaged and have the added hardships related to rural Internet connectivity expense and availability issues. The Wireless Program on which this grant is based consists of these components:

- Monte Vista has a district-wide initiative to differentiate instruction through the use of podcasts. Two years ago, participating teachers started creating podcasts of lessons and lectures. Students view the podcasts as homework and are able to use class time for direct, small-group and individualized instruction. Instead of using class time to disseminate information, teachers are free to assess understandings and facilitate specific learning. Student response has been very positive, and assessment results show increased achievement. The podcasts are available to students outside of school through the district website in homes where there is Internet access. Currently, the District has a very small supply of netbooks with built-in 3G broadband access available for overnight or weekend checkout. The supply is insufficient to ensure equity of Internet access for all students. E-rate funding support for broadband Internet accounts for student home educational use would improve equity of access and the effectiveness of this initiative.
- The On-Line Academy (OLA) students work remotely and need to be on the Internet to complete their course work and to communicate with their teachers through email,

instant messaging, and web meetings. This program serves a wide variety of students including the medically home-bound, expelled students and teen moms without childcare. OLA provides each student with a netbook with an internal 3G broadband modem to access the school's website and courses. The grant would provide support for the broadband Internet accounts that these students use to access their education.

- The Byron Syring DELTA Center utilizes OLA's individualized computer-based courses on-site for high-risk students of the San Luis Valley. For the past three years, DELTA students have used a mix of commercial and teacher-developed curriculum. Each day, students check out a laptop to work in their advisor's room and visit content area teachers when they need specific help. This individualized computer-based approach has led to higher course completion rates and greater academic success. The majority of these students do not have Internet access at home. With E-rate funding for remote Internet access, the District would acquire a larger number of computers for DELTA students to check out so students could also do school work at home after school and on weekends.

1b) How long the Applicant Wireless Program has been in operation and the mobile wireless device(s) being used.

- Students use HP MINI 210-1076NR computers provided by Verizon Wireless as is the broadband Internet service. The students have a usage allowance of 6 GB per month with a download speed of 600 Kbps to 1.4 Mbps. The speeds and allowances have proven very suitable for engaging in the media-rich curriculum.
- The District started the Podcasting Initiative in 2009. Monte Vista High School has been making wireless devices containing downloaded podcasts available to students for checkout for two years now. It is now considering increasing the availability of netbooks with built-in 3G broadband access to help ensure equity of access to podcasts at home.
- OLA has been in operation since 1997. Up until 2009, most students provided their own computers and Internet service in order to participate. If funds were available at the end of the school year, students were given a small stipend to help pay for their Internet connectivity. Beginning with the 2010 – 2011 school year, OLA students were provided a netbook with an internal 3G broadband modem to access the school's teachers, website and courses.
- The Byron Syring DELTA Center has been making computers with wireless Internet access available to students on site for three years now. For the past two years, a limited supply of netbooks with 3G broadband access has been available for

overnight/weekend checkout.

1c) A description of any technical issues associated with implementing the Applicant Wireless Program, including an analysis of any problems with the availability of wireless access to students or patrons off the school or library premises and how those issues are being or will be addressed by the school or library.

Previously when students provided their own computers and Internet service, OLA had a difficult time helping students troubleshoot their computers and Internet service since each student had a different computer model and Internet provider. This also made it difficult to know with any level of certainty if students had enough bandwidth to utilize OLA's interactive coursework. These issues led to the decision that students would receive more consistent tech support and a guaranteed level of Internet bandwidth if the school provided the same computer model and Internet service to all students.

The only technical issue that OLA has encountered with the Verizon Wireless 3G Broadband Internet Access is limited connectivity in one very small and remote location in the State of Colorado. That family was able to successfully use satellite Internet (Hughes.Net) to access OLA content and instructors. All other students have found the 3G Internet access to be consistent, reliable, and sufficient.

The District students checking out Verizon computers for overnight or weekend use have experienced no technical issues with the broadband Internet access. Although the District makes podcasts available in a variety of formats, students without home Internet access, mp4 players, or DVD players must find alternatives to viewing podcasts at home.

1d) What training has been or will be provided to teachers, librarians, students or parents to implement the Applicant Wireless Program?

The District teachers involved in the podcasting initiative have received dedicated podcasting training and collaborate regularly on techniques and best practices. The mechanism for checking out equipment is already in place, and an increase in the number of available 3G broadband capable computers for student checkout would dovetail nicely with current practices.

For OLA, parents and students receive initial training on using the 3G netbooks. Teachers are familiar with the computers and have been trained on how to access the Internet using the Verizon Access Manager. As a result, teachers can use these computers to work remotely, and they can help students troubleshoot simple technical issues. Additionally, students and parents have access to podcasts on using the computers and accessing the Internet. These are videos produced by OLA on the most frequently asked questions of our students, parents and staff. OLA teachers all provide basic technical assistance, and there is a full time technical support person to help students solve more difficult technical issues.

Since the Byron Syring DELTA Center and On-Line Academy share staff, the teachers are trained in providing basic technical support to students and the same advanced technical support resources are available to DELTA Center students.

1e) The extent to which the Applicant Wireless Program is integrated with federal, Tribal, state, regional or local governmental or non-profit initiatives to achieve educational or community access outcomes

Currently, we are not aware of any programs or initiatives that are working to achieve increased off campus educational or community access to the Internet for our area than the one described here.

(2) The poverty level based on the percentage of students eligible for a free or reduced-price lunch under the national school lunch program (NSLP) or a federally approved alternative mechanism, and the current discount rate of the school or library;

According to the E-rate Funding Year 2010 calculations, our District's shared discount was 81%. Our E-rate funding year 2011 discount calculations have not been done yet since the Form 471 filing window will not open until January 11, 2011. For the 2010-2011 school year, the actual percentage of students enrolled in the Monte Vista School District that are eligible for NSLP is 67.49%. The District NSLP percentage has increased over the previous year so the E-rate Shared Discount for Funding Year 2011 should be at the same or a higher level.

3) The financial need of the school or library, including any additional budgetary hardships, notwithstanding the school or library's current discount rate;

The District's shared discount rate is 81%. With the recent funding cuts by the State of Colorado, the District's operating expenses are currently greater than its revenues. This is being sustained by dipping into budgetary reserves from previous years of careful spending.

(4) All costs, including those eligible for E-rate support and those not eligible for E-rate support, associated with implementing the Applicant Wireless Program, including but not limited to costs for equipment such as e-readers or laptops, access and connection charges, teacher training, librarian training, or student/parent training;

Budget

- Netbooks for student and staff educational use – free from Verizon
- Verizon Broadband Internet access
 - \$516.12 per student per year x up to 300 accounts = \$154,836
- Professional Development will be done in house using existing Tech Support Staff
- Tech Support for New Computers – District Technology Budget

(5) The committed school or library resources available to implement the entire Applicant Wireless Program, including whether those funds are from the school or library's general budget or from an outside funding source;

The District is committed to providing the funding for the technical support, professional development and the non-discounted portion of the Internet accounts. Verizon is going to provide the computers, and the broadband Internet Service at the Government rate, and E-rate (from this grant) would provide the discount portion of the cost of the Internet accounts.

(6) The effect EDU2011 support for off-premise connectivity is likely to have upon the school's or library's projects;

For District students, equity of access to podcasts would be ensured. This is particularly important as podcasting has shown promising results in terms of both student assessment and student engagement. As the podcasting initiative to continues to expand, its potential for positive outcomes is greatly increased, but the issue of Internet access equity becomes even more important. Every student deserves the opportunity to receive instruction in this emerging highly effective practice.

For OLA, 3G broadband Internet computers ensure equity of access for all students, making the only deciding factor for student enrollment being appropriateness of the program for the student, not whether the student has sufficient Internet access. Families who can't afford home Internet access can still enroll their children in an online program. By using the same computer model, pre-imaged with all needed software, every student has access to all the programs they need to be successful, and technical support is more efficient due the elimination of the myriad of problems that can arise when many different models are used by students. Most importantly, students have high quality access to educational services even in remote or underserved regions.

For the DELTA Center, the immediate impact would be increased access to educational services for at-risk students. Students who have jobs that require them to be gone for some traditional school hours could check out a computer for an evening or weekend to stay caught up on their work. Teen parents often struggle with attendance due to difficulties finding someone to care for the child while the parent is at work. These teens would be able to check out a computer for an evening or weekend to stay caught up on their work as needed. A number of DELTA Center students who demonstrate high productivity on site have mental or physical health issues that result in high absenteeism, which impedes their progress. The ability for short-term computer checkout to work temporarily from home would significantly increase their success.

(7) An analysis of the cost-effectiveness of the current or planned Applicant Wireless Program as compared to the use of other types of technology that would also meet the Program's objectives;

Our arrangement with Verizon allows us to subscribe to Internet access for our 3G broadband netbooks at a cost of \$43.01 per computer per month. No overage or nationwide roaming charges apply, so unexpected charges are not a concern. This

price plan is below the consumer rate for the same service, reflecting a government rate provided by Verizon. The download speed of 1MB/s and monthly allowance of 6GB have proven to be plenty sufficient for students to interact with teachers and engage in the media-rich curriculum. Verizon has the most extensive coverage among 3G providers in our region, and connectivity has been very reliable. By any standard, this is a good value for the service, but particularly so in a high poverty, rural area where Internet connectivity options are limited and financially out of reach for the majority of our students. Unfortunately, though, the district needs financial support to offer the 3G service to students.

(8) Any relevant technology planning documents and, if applicable, a statement of long-term objectives for the Program;

The School District has a State-certified technology plan in place and enforces compliance with the Children's Internet Protection Act. The District's Technology Plan includes long term goals and objectives as well as strategies for achieving them. The goals, objectives and strategies were developed from data derived from a community wide needs assessment survey. The ETIL Plan in its entirety is available on the District's Technology Webpage -<http://www.monte.k12.co.us/techcornr> . In summary, Goal 1 is to increase staff and student technology and literacy skills. Objective5 for this goal is very relevant to this grant. It states that the District would like to expand the use of appropriate online courses for middle and high school students. Goal 2 is to maintain and improve the quality of technology infrastructure and support throughout the district, and Goal 3 is to increase technology support. The long term objective of this off premises wireless program is to improve equity and access for all District students to educational resources available on-line.

(9) A description of the specific measures taken, or that will be taken, to ensure compliance with the Children's Internet Protection Act and measures to protect against waste, fraud, and abuse.

The school district desires to provide the same protection from and filtering of inappropriate and unsafe content for students who utilize the Internet remotely for school work that is provided for students working within the school network. Laptops and netbooks provided by the District have filtering software installed that provides the same level of protection as on-campus. In addition to the above measures, OLA students and parents sign an Internet Safety Contract. To protect against waste and abuse, students and staff sign an Internet – Acceptable Use Agreement and are subject to electronic mail policies on appropriate use. The policy and agreement documents are linked to District Technology webpage (see link above) for public access.

(10) A description of internal policies and enforcement procedures governing acceptable use of the wireless devices used in the Program off the school or library's premises.

The Acceptable Use Agreement (AUA) is distributed to students and parents for signatures before a student is issued a network account. The AUA states that failure to adhere to the terms of the policy will result in the revocation of Internet access

privileges. The agreement also states that the students and parents understand that violations may constitute a criminal offense, and that school Internet and email activities may be monitored by district personnel.

Required School Information

(1) *The location of the school:* Monte Vista, Colorado

(2) *The name of the school applicant, along with a complete list of the individual schools that will be served, including their billed entity numbers:*

- Monte Vista School District C-8 (Entity Number – 142392)
- Metz Elementary School (Entity Number – 94734)
- Monte Vista High School (Entity Number – 94735)
- Byron Syring DELTA Center (Entity Number – 94736)
- Marsh School (Entity Number – 94737)
- Monte Vista Middle School (Entity Number – 94738)
- Monte Vista On-Line Academy (Entity Number – 16030708)

(3) *A description of the school district or school, including the type of school, such as private, public, charter, or other special type of school:*

The Monte Vista School District includes six accredited public schools including the On-Line Academy, which is a free public online school educating students state-wide.

(4) *a description of the Program's curriculum objectives, the grade levels included, and the number of students and teachers involved and/or being served as part of the program*

The mission of the Monte Vista School District is to achieve educational excellence by preparing students, parents, staff, and community members for the future. Monte Vista High School serves 262, students, over half of which are directly benefitting from the podcasting initiative. Seven teachers are currently involved in the podcasting initiative at that school. Individual podcasts are designed to meet curriculum objectives and are aligned with state standards. The podcasting initiative is also impacting the other district schools (Monte Vista Middle School, Bill Metz Elementary, and Marsh Elementary) with teams of teachers from each of those schools receiving podcasting training and implementing the initiative at their respective schools. The goal of the podcasting initiative is to increase academic achievement by combining best practices with effective use of technology.

OLA's mission is to engage students in a high quality, technology rich, teacher-connected, personalized educational environment that prepares each student to be a successful, knowledgeable, and productive citizen in a 21st century world. As an accredited, state-certified online school, OLA serves approximately 100 online students in grades 6 – 12 and has 7 teachers, a counselor, a tech support specialist, three support staff, and a director. Students are immersed in a rigorous curriculum aligned

with the Colorado Model Content Standard and emphasizing 21st Century Skills

The DELTA Center shares the same staff as OLA and serves approximately 70 highly at-risk on site students. The mission of the DELTA is to provide alternative educational options that empower at-risk students to become successful, knowledgeable, and productive citizens in a 21st century world. Students engage in a rigorous standards-based technology-rich curriculum that emphasizes 21st Century Skills.

(5) *a summary of any data collected by the school on Program outcomes and achievement of Program objectives.*

Although the District podcasting initiative has been in place for a little more than a year, encouraging data is beginning to emerge. AP Chemistry unit test scores are higher, on average, for students enrolled in a class utilizing podcasts than students receiving the same content without access to the podcasts. Many students have requested to be enrolled in a podcast-based math class instead of its traditional counterpart because of their favorable experience with podcasting last year. Student surveys show that when students reflect on their own learning, they feel the podcasts have been greatly beneficial to them.

OLA parents and students have responded favorably to the 3G broadband netbooks, with both portability and reliability cited as strong factors. Students have reported far fewer technical issues than before uniform models were provided for students, resulting in less “down time” interfering with student learning. Student progress rates have increased over past years, and the issue of students falling behind after losing their home Internet access due to financial hardships has been eliminated. In the bigger picture, OLA continues to offer a valuable educational service to students whose circumstances preclude the traditional setting. The first and most experienced online school in the state, OLA’s performance continues to meet or exceed the state’s accreditation and certification guidelines.

Since the DELTA Center incorporated the use of computers to deliver curriculum with teachers available for individual support, the average number of credits earned per student in a year has increased notably. However, the vast majority of students do not have home Internet access or a computer. Students would be even more successful if more 3G broadband computers were available for overnight/weekend checkout. The DELTA Center continues to maintain its accreditation and its Alternative Education Campus designation by meeting or exceeding state alternative school guidelines.