

**Oregon EESC 2009 Last Mile Connectivity Grant Application**

Contact Information:

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**1. Project description – describe the telecommunication challenge you seek to overcome and how your proposal provides a viable, long-term solution.**

The challenge facing Colton School District is two-fold – how to address connectivity issues with limited funding resources and how to prepare Colton students to be competitive with their peers in their post-secondary and career opportunities.

Educational technology standards required under No Child Left Behind and Oregon’s Educational Technology Standards for Students assumes that schools have a robust infrastructure and adequate technical support. Our teachers need a technology infrastructure that realistically supports the work they do and their expectations for technology use by students. As a school district we have a responsibility to create not only nominal access to computers and electronic networks but access that is robust enough to support the kinds of use that can make a real difference in the classroom if we are to address the widening gap between the knowledge and skills students need to succeed in the increasingly global, technology-infused 21st century workplace (Partnership for 21st Century Skills, 2005).

We must be able to move from the technologies available and used by our students in our classrooms today to an environment where our students are able to transition their learning “from” computers to learning “with” the vast resources available online, to be able to incorporate new technologies such as handheld computers, closed-circuit television channels, and two-way online learning classrooms. The recipe for success involves the learner, the teacher, the content, and the environment in which technology is used (Marshall 2002). Increased bandwidth is critical. Bandwidth is the key strategic component for access to today’s plethora of instructional technology-based applications and to support **simultaneous use of several** of these applications at the same time in a classroom/lab setting.

Fiber optic is a vast improvement over existing T-1 lines. To upgrade to faster bandwidth, we will need to have fiber optic capability. As the attached schematic shows, Colton is the only school district in Clackamas County with T-1 lines. **Every school** in every other district in Clackamas County has 100Mb or 1Gb fiber to their buildings. These current limitations become more detrimental to Colton staff and students as additional online resources become available through the Internet and ESD, such as Web 2.0, Safari Montague, etc.

Current connectivity:

Current connectivity rates are 1.5-3.0Mb over T-1 cables. Two T-1 lines connect our high school to Clackamas ESD and the Internet at 3Mb. Connection of the two campuses is through a T-1 line that provides the middle school/elementary school/district office their connectivity to Colton High, Clackamas ESD and the Internet at 1.5Mb.

With Last-Mile Connectivity funding we will connect our two campuses with fiber optic cabling eliminating the need for the T-1 line between the high school and the middle/elementary/district office. With the fiber optic cable in place we are in a position to access the proposed Clackamas County Fiber ring – if they receive funding through the Broadband Technology Opportunities Program. Clackamas County’s proposal seeks to equalize the disparity in broadband access between the urban and rural areas of the county and would address the significant cost of high-bandwidth backhaul to remote area. This fiber ring would bring fiber next to our building and take it to the data center at Clackamas ESD and would allow the district to eliminate two T-1 lines to ESD in exchange for the fiber and would provide Colton School District with the same level of accessibility and educational resources that all other public schools in Clackamas County enjoy.

Our proposal is to install the fiber needed to connect our two campuses, providing the infrastructure for increased connectivity – up to 1Gig between the high school and the middle school/elementary school/district office and to prepare us to take advantage of the county’s dark fiber ring.

Networking/partnering with neighboring district and other entities:

Our current connectivity is provided through ColtonTel (a telephone cooperative and cable company). The neighboring districts (Canby, Estacada and Molalla) are each serviced by their own local telephone cooperatives. We have explored this option and the monthly cost estimates have been prohibitive (≥\$10,000/month). We feel that working with and through our local ESD and connecting to the proposed Clackamas County dark ring of fiber provides us with the best-case scenario for connectivity and increased bandwidth resources for the long-term.

**2. Description of how the proposal satisfies the criteria outlined in Section E**

The project provides single mode fiber to Colton High and Colton Middle/Colton Elementary/Colton District Office Campuses. This would allow the schools to share physical and data resources such as servers, instead of running duplicate hardware and would allow connection to the two campuses of up to 1Gig. This would also position the schools to connect to the proposed Clackamas County dark fiber ring which would provide Colton School District with the connectivity currently available to all other schools and school districts within the Clackamas County ESD.

**3. Description of sites covered and projected numbers of students and educators served**

The Colton School District consists of three schools: Colton Elementary (K-5), Colton Middle (6-8) and Colton High School (9-12). Our schools have been rated among the highest on the Oregon Report Card. The District is governed by a five member board and administered by Linda Johnson, Superintendent.

Home to the 2005-06 Oregon Teacher of the Year and the 2006 Middle School Principal of the year, Colton has long been recognized for its exceptional staff. The district has also had the foreign language teacher of the year, Technology Educators of Oregon’s teacher of the year, BEC educator of the year, and the Oregon CIS Les Adkins award for excellence in career delivery programs. Additionally, Colton teachers are on the boards of a variety of organizations: State of Oregon Board of Education teacher advisor (2007-09), president of Oregon Science Teachers Association (2009-10), president of Oregon Association of Career

and Technical Education (2007-08), and board member Oregon Education Association. At the 2005 OSBA Convention, Colton was honored with the Oregon Association of School Executives' Excellence in Curriculum Award for its senior seminar program. The district has also been honored three times with the Portland-area Business Education Compact's partner award.

Since being named as one of six Oregon New Century Schools in 1999, Colton High School has been at the forefront of high school reinvention efforts in Oregon. In August 2005 CHS was named as one of seventy-five high schools across the nation to participate in a five year initiative to identify effective high school models that are focused around achieving a rigorous and relevant curriculum for all students. This initiative is in partnership with the International Center for Leadership in Education, the Council of Chief State School Officers and the Bill and Melinda Gates Foundation.

Colton schools benefit from a high degree of volunteerism from parents who assist in classrooms, sponsor special activities, raise money to support school activities and participate in school events.

Number of students and teachers impacted:

Elementary School	High School	Middle School
Students: 240	Students: 258	Students: 163
Educators: 15	Educators: 14	Educators: 10

**4. Key ESD and/or school staff involved in proposal:**

We worked closely with representatives from Clackamas ESD including several meetings in the school district and at the Clackamas ESD facility to view equipment and discuss in detail our needs to address bandwidth issues. We also worked closely with ESD representatives on our e-Rate application and district technology plan.

Key staff included:

Linda Johnson, Superintendent – Colton School District  
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Jeremy Pietzold, Network Engineer - Clackamas Education Service District  
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Bob Feltz, Colton School District - District Technology Specialist  
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Beth Lund-Glassman, Technology Director – Colton School District  
Colton Middle School Principal  
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Andrea Schrosk, Accountant  
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**5. Description and role of any contractors involved in Proposal:**

North Sky Communications – David P. McNeely (800.755.6920) – conducted site visit and provided cost estimate for labor, equipment and materials needed to “furnish and place new strand and lash approximately 5,300 feet and furnish and place new underground one 1.5” HDPE approximately 1,350 feet from the last pole to the hand hole outside the middle school, place 24 strand fiber in existing conduit into each building.” North Sky Communications has also provided information for the Clackamas County dark fiber ring proposal and is familiar with those specifications.

Mountain States Networking – Nathan Fekete (503.914.5911)  
Clackamas ESD contacted Mountain States for us to get a quote of the cost of items needed to connect the fiber optics at the two campuses. This equipment will be purchased by the Colton School District from general funds.

ColtonTel – Ryan Roundtree (503.829.3211) – is our liaison with ColtonTel and has provided estimates on option for fiber optic cable installation between the two campuses and to ColtonTel and monthly recurring cost estimate for 100Mb transport from Colton School District to ESD.

**6. If applicable, a description of how the grant funds leverage other resources and their value:**

**COLTON SCHOOL DISTRICT 53 TECHNOLOGY BUDGET 2009-2010**

<u>Description</u>	<u>Amount</u>	<u>Account</u>
Classified Salaries	\$ 44,336.00	2669-112
Payroll Costs	3,550.00	2669-220,231,232
Benefits	5,800.00	2669-210
Consumable Supplies	1,000.00	2669-410
Non-Consumable	10,000.00	2669-460
Dues & Fees	500.00	2669-640
Data Processing Services	8,500.00	2521-386
Frame Relay*	26,000.00	2542-356
Telephone & Internet *	<u>39,000.00</u>	2542-351, 2552-351, 2542-356
	<u>\$138,686.00</u>	

Additional technology funding sources:

Title IID \$979

\*Our e-Rate award for 2009-10 was \$26,000 which subsidizes regular telecommunication services for the District. With the funding from this Last-Mile Connectivity grant, we can apply for special project funds through our e-Rate application of up to 54% of project cost.

**2009-2010 Proposed Budget Request**

Engineer, design and pole permit application	\$ 6,500
Materials	9,300
Labor and equipment	28,200
Splice and test	<u>2,000</u>
	<u>\$46,000</u>

**Colton School District Last Mile Connectivity Grant Network Proposal**  
 October 23, 2009

