

LastMile Connectivity Grant Application



*Submitted by Columbia Gorge Education Service District
(CGESD) on behalf of South Wasco County School District # 1*

Project Description

South Wasco County School District in Maupin, OR (SWCSD) currently utilizes a PVC frame relay circuit to the CGESD office for Internet connection. To access the Internet, there is a T1 connection at the district which terminates at the CGESD end.

The only viable and cost-effective solution to this issue was through wireless technology. Sawtooth Technologies has towers all over the Columbia Gorge area. They are proposing a microwave solution that will guarantee a minimum of 10Mbps throughput.

The project consists of setting up an antenna at the SWCSD district office building that will send traffic via licensed 3.65Ghz microwave signals to the Maupin TV tower, then to the MCI Shaniko Tower. From there it's beamed to their Fir Mountain tower via 11 Ghz microwave. Finally, it is connected to a new microwave antenna at the CGESD office (See diagram page 5). This new antenna was acquired and installed through the 08/09 Last Mile grant last year as part of the Dufur/Mosier awards.

How This Project Will Fulfill The Grant Criteria

Currently SWCSD connects with less than 1.5 MBps on a T1. Through it's wireless system, Sawtooth can guarantee a 10MBps circuit between the district and CGESD office. Once on the CGESD WAN, they can utilize our QLife/LS Networks connection out to the Internet.

Site Information

South Wasco County School District is a K-12 district located in Maupin, Oregon, approximately 40 miles south of The Dalles, OR. The district currently employs 40 staff and serves 230 students.

This project will involve the following staff:

Name	Title	Phone	eMail	Organization
Ryan Wraught	Principal	541-395-2225	ryanw@swasco.net	SWCSD
Theresa Ewing	Network Administrator	541-395-2645	theresae@swasco.net	SWCSD
Bryan Alexander	Technology Director	541-298-3140 541-370-5331	balexander@cgesd.k12.or.us	CGESD

South Wasco County School District #1
P.O. Box 346
306 Deschutes Avenue
Maupin, OR 97037
Phone: (541) 395-2645 Fax: (541) 395-2679

Contractor Information

Sawtooth Technologies will solely be responsible for installation and setup of all microwave equipment and the associated VLANs (including managing/overseeing any sub-contractors). They are a NOAA-Net contractor that provides Internet service out of Stevenson, Washington and possess an eRate SPIN number.

Configuration changes of current network switches and routers will be by INX Inc. INX is a Cisco and OETC partner with an office in Portland. Vendor contacts involved in this project are:

Name	Title	Phone	eMail	Organization
Brian Adams	System Engineer	509-427-4865	adams@saw.net	Sawtooth Technologies, LLC.
Rick Howard	Sales	503.594.0364	rickH@INXi.com	INX Inc.

Leveraging Resources

The proposal by Sawtooth actually encompasses 3 school sites: Mosier Community School, Dufur School District, and South Wasco County School District. Coordinating these 3 projects together allow us to utilize one microwave tower at CGESD for all three sites. This permits cost sharing for the equipment at the CGESD site among multiple projects.

Equipment and Labor Details

Please see attached Sawtooth document, page 4.

Budget Page

Labor/Equipment SWCSD Site and Fir Mountain (Sawtooth Tech)	\$ 72,839.10
ESD, Maupin router configuration (INX Inc.)	\$ 3,550.00
Grand Total for Project	\$ 76,389.10

Our application for the LastMile grant is intended to cover the estimated \$72,839.10 cost to install and setup this wireless network. The additional router configuration cost will be covered by eRate funds we have saved from previous reimbursements. The additional cost of the installation not covered by the \$50,000 grant will be spread over a two year period with the monthly charges.

There will be monthly charges for equipment and tower maintenance. Currently SWCSD is billed \$ 405 per month for their end of a T1 connection. SWCSD would be able to funnel the funds they normally spend for a T1 to help cover the cost of the maintenance. The district is committed to budgeting for the additional recurring expense and anticipate continued eRate coverage as they have a high level of free and reduced eligible students.

Likewise, CGESD would be able to move it's funds from the current T1 connection to increase it's bandwidth with LS Networks. CGESD pays \$425 for the other end of this connection and is submitted to USAC for eRate reimbursement. Starting July 2009, the region's Internet bandwidth was increased from 35Mb/sec to 50Mb/sec. If this grant is successful and the new wireless link is installed, we would be able to move the monthly amount spent on the T1 to increase our bandwidth even more.

CONFIDENTIAL & PROPRIETARY

Item		Details		Brand	Catalog Number	Vender		Maupin High School	Maupin TV Tower	Shaniko Microwave Facility	Fir Mountain Microwave Facility	Install Totals
Location												
Project Description												
Backbone Radios												
	Radio	1000 GigE IDU - FCC 50 Mbps - 300 Mbps	Exalt Communications	E00091F	Hutton					3430.05	3430.05	
	Software	Upgrade Key for Exalt	Exalt Communications							\$ 2,950.00	\$ 2,950.00	
	Radio	AN80-I 3.65 PTP	Redline Communications	80IRR-G-G-T35	Hutton	\$ 1,200.00	\$ 2,615.96	\$ 1,200.00				
	Radio	AC Power Supply	Redline Communications		Hutton	\$ 18.48	\$ 18.48	\$ 18.48				
Microwave Total						\$ 1,218.48	\$ 2,634.44	\$ 7,598.53	\$ 6,380.05	\$ 17,831.50		
Hardware	Antennas	2' DIA Parabolic with Radome 6' DIA Parabolic with Radome	Radiowaves Radiowaves		Hutton Hutton	\$ 650.00	\$ 1,300.00	\$ 650.00	\$ 4,332.00	\$ 4,332.00		
Network Switch	Cisco	ME 3400-24TS			Cisco	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00				
Standard Site												
	Ground Kit	9914 Cable			Hutton	\$ 46.00	\$ 46.00	\$ 92.00	\$ 46.00	\$ 46.00		
	Cable Ties	32" Heavy Duty, 50/pkg			Hutton	\$ 25.00	\$ 25.00	\$ 50.00	\$ 25.00	\$ 25.00		
	Butyl Tape	4" x 10' Roll			Hutton	\$ 75.00	\$ 75.00	\$ 150.00	\$ 75.00	\$ 75.00		
	Lightning Arrestor	2ea per Radio			Hutton	\$ 324.00	\$ 324.00	\$ 648.00	\$ 324.00	\$ 324.00		
	Entry port	4" 2 port	Microfect	95796	Hutton	\$ 37.72	\$ 37.72	\$ 75.44	\$ 37.72	\$ 37.72		
	Antenna Supports	Site dependant roof and or wall mount steel structural supports			Microfect	\$ 550.00	\$ 550.00	\$ 1,100.00	\$ 550.00	\$ 550.00		
Battery Plant	Minuteman Enterprise UPS with remote monitoring					\$ 450.00	\$ 450.00	\$ 900.00	\$ 450.00	\$ 450.00		
Hardware Total						\$ 3,657.72	\$ 4,307.72	\$ 9,497.44	\$ 5,839.72	\$ 23,302.60		
Labor												
	Design and Engineering		Man hours		Sawtooth	\$ 425.00	\$ 425.00	\$ 1,275.00	\$ 425.00	\$ 425.00		
	Project Management		10		Sawtooth	\$ 212.50	\$ 212.50	\$ 637.50	\$ 212.50	\$ 212.50		
	Mount Dish		6		Sawtooth	\$ 127.50	\$ 127.50	\$ 382.50	\$ 127.50	\$ 127.50		
	Installation of Cable		4		Sawtooth	\$ 85.00	\$ 85.00	\$ 255.00	\$ 85.00	\$ 85.00		
	Install enclose, radio, wiring etc		6		Sawtooth	\$ 127.50	\$ 127.50	\$ 382.50	\$ 127.50	\$ 127.50		
	Align and test		12		Sawtooth	\$ 255.00	\$ 255.00	\$ 765.00	\$ 255.00	\$ 255.00		
	Travel		60		Sawtooth	\$ 1,275.00	\$ 1,275.00	\$ 3,825.00	\$ 1,275.00	\$ 1,275.00		
Labor Total						\$ 2,507.50	\$ 2,507.50	\$ 7,522.50	\$ 19,167.50	\$ 31,705.00		
Project Total (One Time Charge)						\$ 7,383.70	\$ 9,449.66	\$ 24,618.47	\$ 31,387.27	\$ 72,839.10		
Monthly Service Charges:												
10 Mbps Ethernet hand-off at CGESD The Dalles Oregon											755.00	