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Learning Station Overview

1. *Cook County: Fiber Optics Through the Forest: Arrowhead Electric Cooperative, Inc.*

Cook County is one of the most scenic and visited natural areas of Minnesota. Located in rural remote northeast Minnesota, its' boundaries are Canada to the north, Lake Superior to the southeast, and Lake County to the west. This forms a triangle that includes the Boundary Waters Canoe Area Wilderness (BWCAW) and the Superior National Forest. Trees outnumber people 100,000 to one. 90% of Cook County is either federally or state owned. Ready to come for vacation? Don't bother bringing your computer. One ugly statistic mars this beautiful landscape. Out of 87 counties in Minnesota, Cook County ranks as one of the worst in broadband availability for its citizens.

This award will allow Arrowhead Electric Cooperative, Inc. to build a last-mile FTTH network to serve northeastern Cook County. Because of the topography of the land and dense forestation, fixed wireless is not an option. This wireline, passive fiber-optic network will offer up to 100 Mbps symmetrical service. Approximately, 11,363 people stand to benefit, as do roughly 138 businesses and 63 community institutions.

While beautiful to the eye, the area is in steep economic decline. Cook County has lost 23% of its non-farm jobs in the last eight years. The population is stagnant, growing less than .3% per year. In its continuing efforts to ensure its citizens have equal access and opportunities Cook County has been instrumental in assisting Arrowhead Electric Cooperative. Recently, Cook County committed up to \$4MM in local 1% sales tax assistance to Arrowhead Electric. In addition to financial assistance, Cook County has also convened a Broadband Commission to promote the adoption, application, and access to broadband services by its citizens, businesses, and institutions. It is the firm belief of the Cook County Commissioners that these new tools are the pathway to a stronger, healthier, and more economically diverse community.

Presenter: Danna Mackenzie, Director of Information Systems, Cook County, Minnesota
danna.mackenzie@co.cook.mn.us
218-387-3662
Twitter: @danna_mackenzie

2. *Fiber To The Premise in Southwest Minnesota: City of Windom*

Southwest Minnesota Broadband Services (SMBS) is in the process of building out a fiber-to-the-premise (FTTP) network serving over 3,700 residences and businesses across Cottonwood, Jackson and Nobles counties. The presentation will include:

- A description of the member communities and how the Bladin Feasibility Study program enabled the initial steps of the project
- How the member communities came together and prepared for the Broadband Stimulus application
- The Broadband Stimulus process
- The unique partnership between SMBS and City of Windom Telecommunications
- Current progress and success

- Success stories already regarding economic development and partnerships with both the public and private sector
- Important takeaways from the project so far

Presenter: Dan Olsen
 General Manager SMBS and Windomnet
 PO Box 1006
 110 S Hwy 86
 Lakefield MN 56150
 507 832-2000
 dano@windomnet.com

3. Greater Minnesota Broadband Collaborative: Enventis Telecom

Enventis' Greater Minnesota Broadband Collaborative project is a significant example of federal Policy directly affecting Progress to help facilitate Border to Border Broadband access throughout Minnesota. In 2010, Enventis received an award of \$16.8 million through the Broadband Technology Opportunities Program (BTOP) to expand its network to increase access to affordable broadband services, particularly in outstate or underserved areas. This award is backed by a 30% company investment of \$7.2 million for a total project cost of \$24 million.

Enventis began construction in July 2011 on this middle-mile project that is creating a high-capacity, Ethernet fiber network directly connecting anchor institutions throughout Minnesota. The statewide network will directly benefit our collaborative partners; Mayo Clinic, University of Minnesota, and State of Minnesota, and will provide access to affordable, high-capacity broadband services in rural Minnesota communities as well as create new jobs.

The build includes construction of 428 fiber optic network miles equipped with 10GB Dense Wave Division Multiplex (DWDM) to provide economy of scale to deliver high bandwidth at a low cost per bit. New construction includes two long haul fiber builds: Minneapolis/St. Paul to Duluth/Superior, and Brainerd to Moorhead. The new and existing network will be extended to provide middle-mile fiber laterals to serve partner sites.

Enventis is a leading network integrator and provider of high-capacity fiber and data services in the Midwest. Enventis also provides managed and hosted services and professional support services to businesses of all sizes. Enventis is a subsidiary of HickoryTech Corporation, the largest telecommunications company with headquarters in Minnesota. HickoryTech was founded in 1898.

Presenters: Greg Flanagan
 Director of Business Development & Wholesale Services
 Enventis, Inc.
 21 West Superior Street, Suite 200, Duluth, MN 55802
 Office: 218-740-6153 Cell: 218-590-7991 Fax: 218-740-6249
 gflanagan@enventis.com

Paavo Pyykkonen
 Business Development Manager
 Enventis, Inc.

2950 Xenium Lane North, Suite 138, Plymouth, MN 55441
Office: 763-577-3913 Cell: 763-398-9194 Fax: 763-577-3999
ppyykkonen@enventis.com

4. *Bringing Fiber to the Premise in Rural Minnesota: A Private/ Public Partnership: Farmers Mutual Telephone Company, Federated Telephone Cooperative*

This learning station describes a private/public partnership for broadband deployment in a rural Minnesota county. The partnership is between Farmers Mutual Telephony Company of Bellingham, Minnesota and Lac qui Parle County, Minnesota. Both entities made significant contributions to an application submitted in the second round of the Broadband Initiatives Program, which resulted in \$9.6 million of ARRA funding awarded in a combination loan/grant. The award will help bring an all Fiber to the Premise (FTTP) network throughout the remaining parts of Lac qui Parle County, Minnesota. This project covers 339 square miles with 374 miles of fiber optic cable providing broadband to 1561 households, 165 business and 12 critical community facilities within the County.

Prior to being awarded funding for this project, both entities have been involved in a strategic broadband initiative. The Lac qui Parle County EDA and Farmers Mutual Telephone Company invested funds to conduct a Feasibility Study to evaluate the needs of the County, which resulted in a broadband strategy.

Farmers Mutual Telephone Company was one of the first rural cooperatives in the nation to complete a Fiber to the Premise (FTTP) network for all its members and now through a partnership with Lac qui Parle County will expand its borders to build a Fiber to the Premise (FTTP) network throughout the County.

Presenter: Kevin Beyer, General Manager
Farmers Mutual Telephone Company
PO Box 368
301 2nd Street South
Bellingham, MN 56212
320-568-2105

5. *Halstad Telephone Broadband Stimulus Project: Halstad Telephone Company*

Halstad Telephone Company is installing Fiber to the Premise (FTTP) to 1,069 underserved locations in five towns and surrounding rural/farm areas in Norman and Polk Counties in Minnesota

Presenters: Tom Maroney, CEO
Halstad Telephone Company
PO Box 55
345 2nd Ave W
Halstad, MN 56548
Phone: 218-456-2125

Mark Forseth, Operations Manager
Halstad Telephone Company
PO Box 55
345 2nd Ave W
Halstad, MN 56548
Phone: 218-456-2125

6. *Fiber To The Premise in Lake County: Lake County*

This project will allow Lake County to offer FTTP advanced voice, video and data services to every home and business in Lake and eastern Saint Louis Counties. Approximately 37,000 people stand to benefit, as do roughly 1,000 businesses and 98 community institutions. In addition to the 510 jobs Lake County estimates this project will create upfront, it will provide a foundation for economic growth and job creation for decades to come.

Presenters: Paul Bergman
Lake County
711 9th Avenue
Two Harbors MN 55616
Paul.Bergman@co.lake.mn.us
(218) 830-1359

Jeff Roiland
Jeff.s.roiland@gmail.com
(320) 295-2482

7. *Integrating Computer Literacy and ELL with Urban and Rural Latinos: Mission Economic Development Agency (Latino Economic Development Center)*

For the past year, LEDC has been not only developing basic computer skills trainings, but also incorporating computer usage into our ELL classes thanks to the BTOP project. Please join us for a conversation surrounding the challenges and many rewards of working with adults whose first language is not English. Our desire is to engage you in a dialogue regarding the importance of teaching basic computer skills to low-income populations, touching on our work in rural areas, as we have realized that there is a big difference between working with rural Latinos and urban Latinos. This presentation is also a great opportunity to learn about the exciting new developments occurring in the Latino Economic Development Center's rural program.

Presenters: Yolanda Cotterall
Greater MN Program Manager
yolanda@ledc-mn.org
(612) 724-5332

Sara Lopez
Outreach and Training Program Coordinator, Latino Academy TTOIC
sara@ledc-mn.org
(612) 724-5332

8. Northeast Minnesota's Middle Mile Fiber Project: Northeast Service Cooperative

Representatives from the Northeast Service Cooperative (NESC) in Mountain Iron will provide an overview of the Northeast Minnesota Middle Mile Fiber Project, a broadband infrastructure project, that will create of 915-mile fiber optic backbone in eight counties in northeast Minnesota including Aitkin, Itasca, St. Louis, Pine, Lake, Cook, Koochiching and Carlton. Rural Utilities Service at the United States Department of Agriculture awarded NESC \$43.5 million in federal funding through the American Recovery and Reinvestment Act in March 2010. Construction for the project started in May of this year, with 415-miles to be completed this year. Services will start being lit in the early part of 2012. The fiber optic network will connect hundreds of critical service sites including education, health care, city, county, state and economic development. The Project will enhance the services NESC currently provides, which include academic programming, curriculum development, special education, online learning, health and safety, IT consulting, telecommunications and insurance pool. NESC serves 32 school districts and 79 cities, counties and other governmental agencies throughout Northeast Minnesota. Over the years, the mission of the Northeast Service Cooperative has evolved to the simple phrase: "Collaborating to meet your changing needs."

Presenters: Paul Brinkman
Northeast Service Cooperative
5525 Emerald Avenue
Mt. Iron, Minnesota 55768
(218) 748-7603
www.nesc.k12.mn.us
[www.twitter.com @Paul_Brinkman](http://www.twitter.com/@Paul_Brinkman)
<http://paulbrinkman.blogspot.com/>

Tiffany Anderson, Project Coordinator
RUS Project MN 1111- A40
Northeast Service Cooperative
5525 Emerald Avenue
Mt. Iron, Minnesota 55768
218-741-1719 FAX
218-748-7624 ext. 2124
tanderson@nesc.k12.mn.us
www.nesc.k12.mn.us

9. Learner Web – A New Tool Supporting Digital Inclusion: Portland State University (Minnesota Literacy Council)

Come see a live demonstration of a new online learning tool. Learner Web is a research-based, online learning support system that customizes content to help learners meet their goals. Learning Plans are filled with free web-based resources, assessments, and portfolio space. Learning Plan content is created locally but shared nationally. Each local region has it's own website built with local resources where available.

U.S. Department of Commerce Broadband Technology Opportunities Program funds the Learner Web Digital Literacy Project. It addresses primary barriers to broadband use:

- Affordability
- Lack of digital literacy skills
- Perceived lack of relevance to daily lives, needs, and aspirations

The primary target population for this project is low-income adults, often without a high school education, including immigrant communities. These learners work to meet their digital literacy goals using Learner Web with the support of tutors. Nationally, the project hopes to serve 23,000 learners in 90 public computer centers in 5 states during the 30-month implementation phase.

Learners registered in the program first work on building digital literacy skills and develop an understanding of what high-speed Internet is and how to access it. Learners then apply these skills and this information as they are supported in career exploration and job search.

Presenter: Jenifer Vanek
Learner Web Administrator/Consultant
Minnesota Literacy Council
700 Raymond Avenue, Suite
St. Paul, MN 55114
651-645-2277
jvanek@themlc.org

10. *Broadband Access: Engaging Diverse Communities: Regents of the University of Minnesota*

The Broadband Access Project is a \$3.6-million initiative of the University of Minnesota's Urban Research and Outreach/Engagement Center (UROC) to improve high-speed internet (broadband) access, awareness, and use in four federally designated poverty zones in Minneapolis and St. Paul. The project supports development and enhancements of 11 community-based public computer centers for underserved populations, including African-Americans, Latinos, American Indian, and Asian and African immigrants.

The goal of the BAP is to help eliminate the digital divide by enhancing and expanding access to high-speed broadband in underserved communities to expand access to information about employment, education, health, and community and economic development. The project will open doors, enhance lives, and create access and job opportunities through technology.

Community Partners include the sub-awardee, the Minnesota Multicultural Media Consortium (MMMC) and Asian Community Technology Center, Centro, Glendale Townhomes-Minneapolis Public Housing, Hmong American Partnership, Lifetrack Resources, NorthPoint Health and Wellness Center, Patchwork Quilt, Phyllis Wheatley Community Center, Project for Pride in Living, Sabathani Community Center, and the YWCA of Saint Paul.

Benefits to the community

- Established two new and upgraded nine existing community-based public computer centers and increased broadband speeds at participating PCCs
- Create 24 BAP apprentice jobs in communities over the life of the grant
- Increase public awareness of how broadband can improve lives
- Provide customized trainings for individuals and groups, including not-for-profit organizations and small, disadvantaged, women-, and minority-owned businesses.

Presenters: Heidi Lasley Barajas
 Associate Dean, College of Education and Human Development
 Executive Director, Urban Research and Outreach/Engagement Center
 University of Minnesota
 hbarajas@umn.edu
 Dean's Office
 104 Burton Hall
 178 Pillsbury Dr SE
 Minneapolis, MN 55455
 612 625 4823

Sara Axtell, Ph.D.
 Community-Campus Health Liaison/
 Public Engagement Faculty Development Liaison
 University of Minnesota, and
 Faculty-at-Large, Cultural Wellness Center
 Family Social Science
 290 McNeal Hall
 1985 Buford Ave.
 St. Paul, MN 55108
 612-625-0252
 axtel002@umn.edu

11. Planning for the Future: Todd County and Arvig Telephone Company

Todd County has recently been awarded a Blandin Feasibility Study grant to study bringing Ultra-Broadband services to all of Todd County not currently served. In this session attendees will learn:

- What was the community impetus for the project to begin, who are the important public and private partners
- Why Todd County chose to find a private sector partner, Arvig Communication Services, to move forward with the study
- What are the components of the feasibility study including:
 - Engineering Study
 - Operational Study
 - Marketing Study
 - Community Anchor meetings and interviews
 - Financial Study
- How the process has been received by the community
- Three different focuses of the study
 - Rural not served by ACS
 - Cities not served by ACS
 - Upgrade of ACS owned properties to all fiber-to-the-premise (FTTP)

Presenter: Nathan Burkett
County Administrator-Todd County
347 Central Avenue, Suite 5
Long Prairie, MN 56347
nathan.burkett@co.todd.mn.us
(320) 732-6447

12. Connect Anoka County Community Broadband Network: Zayo Bandwidth, LLC

The Connect Anoka County Community Broadband Network, a partnership between Zayo Bandwidth and Anoka County, Minnesota, plans to make high-speed broadband services available to governments, businesses, community anchor institutions, and local Internet service providers in Anoka County and parts of nearby Isanti and Ramsey Counties. Anoka County is one of the poorest counties in the Twin Cities metro area, with significantly higher unemployment and foreclosure rates than most of Minnesota. Many areas of the county lack broadband speeds sufficient to maximize educational opportunities, government services, and public safety responsiveness. To address this need, the project plans to build a new 286-mile fiber network that will provide speeds between 100 Mbps and 10 Gbps.

Presenters: Scott Griebel
Director of Stimulus Projects
Zayo Bandwidth
901 Front Street, Suite 200
Louisville, CO 80027
303-381-3379

David Minke
Project Manager
Anoka County
2100 3rd Ave, Suite 700
Anoka, MN 55303
763-323-5742