The Computerworld Honors Program

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Final Copy of Case Study

Year:
2013

Status:
Laureate

Organization Name:
Northwest Open Access Network (NoaNet)

Organization URL:
http://www.noanet.net/

Project Name:
NoaNet Washington Rural Access Project (WRAP) Project

Category:
Economic Development

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

NoaNet is Washington state's leading nonprofit broadband provider, working to bring high-speed broadband access to nearly 260,000 people in rural and underserved areas of the state as part of the NoaNet Washington Rural Access Project (WRAP) Project. As broadband access has increased in metropolitan areas of our state, an unacceptable "digital divide" has left many rural communities with limited or no high-speed access, exacerbating economic, medical, and social isolation. This lack of broadband infrastructure limits business, educational and healthcare opportunities in these communities and discourages businesses to relocate to or expand in areas that are not served by broadband connectivity. NoaNet is utilizing an infusion of $139 million in federal

Broadband Technology Opportunities Program (BTOP) grants with $45 million in matching funds to bring broadband access to 170 rural communities and 2,000 schools, hospitals, emergency responders, libraries, colleges and universities across Washington state. Through this funding, NoaNet is increasing the backbone that serves rural communities 100-fold, leveling the playing field in the world of latency. It moves the small rural communities, such as Asotin, closer to the access of metropolitan areas such as Seattle. This is a landmark opportunity to secure Washington's economic future and bring rural areas of our state into the modern, technology driven era. NoaNet's expansion addresses the state's digital divide and represents an unprecedented transformation of our state's high-speed broadband infrastructure. This statewide program, now over halfway to completion, will help save lives, reduce government costs, educate young people and create business opportunities for generations to come.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

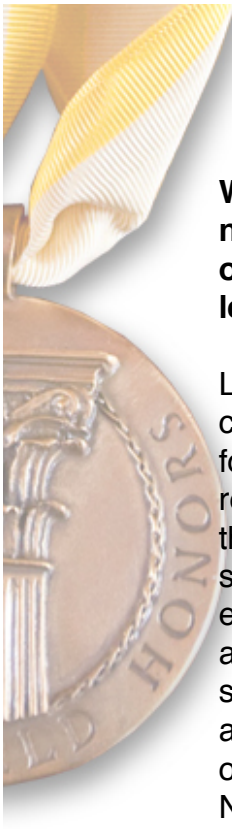
NoaNet's Round I award date was February 28, 2010, with a federal grant share of $84 million. NoaNet's Round II award of $54 million was received July 29, 2011. Construction and implementation of the Round I work began in spring 2011 and ended in December 2012, with major completion of broadband fiber routes in every area of Washington state, from Blyn on the Olympic Peninsula, to Odessa and Colfax in Eastern Washington. Further construction and route activation is planned during the Round II project phase that began in January 2013 and will conclude in December 2013, with route completion in areas including Stevens County in Northeastern Washington and Long Beach on the Washington coast. NoaNet is deploying state-of-the-art broadband technologies as part of this project, including big iron Juniper routers and a 100G wavelength backbone provided by ADVA Optical Networks. The routers by Juniper Networks provide cutting-edge routing technology that increases NoaNet's options for the foreseeable future. This equipment transitions the capacity to the rural communities by 1,000-fold, This is like taking a cow path to an interstate freeway. With the ADVA 100G optical network, NoaNet increases it's backbone capacity by 100-fold and levels the playing field in the world of latency for rural communities. It moves the rural community closer to the urban from a technology perspective, future-proofing the network for the next 10 years and beyond and laying the groundwork for 400G or 1,000G.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

The NoaNet Washington Rural Access Project (WRAP) is completing Round I and implementing Round II project stage. This project will be the culmination of the current NoaNet broadband expansion program, including route construction in several areas across Washington state, including the Okanagan area, Southeast Washington and the Yakima area, and completion of end-user connections through our local anchor institutions that include schools, libraries and local businesses. As NoaNet completes the broadband fiber highway connecting rural and underserved communities in Washington state, these anchor institutions, with the help of local Internet service providers, will provide the bridge to further bring high-speed Internet to local residents and outlying areas.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

During Project Round I, broadband fiber routes were constructed in rural Eastern Washington to several small towns in the Columbia River basin that had previously lacked access to high-speed Internet, including Kahlotus, Connell and Basin City. According to Tim Nies, director of administrator services for Franklin County PUD, at best these towns had previously been served by irregular wireless Internet service, and now have access to high-speed broadband providing a "tremendous resource for their communities." The Mid-Columbia Libraries, which are based in the Tri-Cities and serve the mostly rural Columbia Basin area, maintain several libraries in the outlying communities, which are often technology centers for the surrounding area. According to Executive Director Kyle Cox, some of these libraries had no Internet access at all prior to the NoaNet broadband expansion project. "Thanks to this project, these people have access to the rest of the world at a high-speed – it's phenomenal," said Cox. Secure and reliable access to broadband allows the branches of the Mid-Columbia Libraries to bring the World Wide Web to their geographically isolated communities, for everything from job hunting to keeping in touch with grandkids on Facebook, even in areas where high-speed Internet access had never before been possible.



Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

Like the spread of electrical power access in rural areas during the early 20th century, the expansion of reliable high-speed Internet is increasingly a top priority for local governments across the country. It is no longer viable for small, rural and remote communities to remain disconnected from a now nearly essential utility that is widespread in metropolitan areas. Like those of us that reside in big cities, small towns need access to the Internet for e-commerce, such as to buy farming equipment and get the best price for seasonal harvests, and for tele-healthcare and connecting with family online. They also need secure broadband for public safety, for better communication between police officers and their dispatchers, and to stay informed and educated in a rapidly changing society, where going online daily is a regular practice for most Americans. Using the blueprint that NoaNet has created through the implementation of its Washington Rural Access Project, other states, counties and utilities can find solutions to expanding their own networks, providing greater high-speed Internet access for their citizens. As part of its federal BTOP grand award, NoaNet is keeping regular and dedicated records of its route construction and broadband expansion progress, in hopes that other communities will use this information in working to bring broadband to all.