



Closing the rural digital divide

Allband, Merit and Gigabit Libraries Network

Montmorency and Alpena, Michigan, USA



25.4 million Americans lack access to broadband internet¹, which impedes their ability to pursue education and jobs. Without consistent and affordable internet access, 31% of rural America is at risk of being left behind.¹

The Microsoft Airband Initiative partners with local communities, internet service providers (ISPs), entrepreneurs and nonprofits to bring digital access to unserved and underserved parts of the world, including less populated regions of the United States. By using unused television frequencies, called TV white spaces (TVWS), Microsoft and its partners are seeking to expand the reach and reduce the cost of internet access. This way, more people can get online affordably in rural America.

By partnering with Allband Communications, Merit Network and Gigabit Library Network, Microsoft is powering TVWS pilot projects to deliver Internet access—and 21st century opportunities—to residents, schools and anchor institutions in Michigan’s Montmorency and Alpena counties.

25.4 million

The number of Americans who don't have access to broadband internet.

10-20x

The increase in connection speed in Montmorency and Alpena Counties.

2 million

The number of rural Americans Microsoft has pledged to cover with broadband internet access by 2022.²

Closing the homework gap

By collaborating with local schools, the TVWS initiative is helping close the "homework gap"—when children with no or slow internet struggle to do schoolwork at home. After all, 70% of teachers nationwide assign homework that requires internet to complete, so children living in areas with limited broadband are at an educational disadvantage.

By mounting a base station atop a water tower and connecting the service to Allband's fiber network, the initiative provides 360-degree coverage to more than 90% of the district's school bus routes. Now children traveling to and from school have the means to research papers or explore college, empowering them to pursue their full potential.

Bringing the internet home

Many of us take internet access for granted, but the digital divide excludes millions of Americans from economic opportunities. Microsoft is using novel approaches such as TVWS to make technology a force for economic inclusion.

Residents use roof-mounted receivers and Wi-Fi modems to access the TVWS signal, empowering them to take advantage of opportunities afforded by broadband. For example, one user in Alpena saw his internet speed jump tenfold via the Airband Initiative, which allows him to work from home.

Innovating small businesses

By installing internet-connected cameras on an elk preserve, Jack Matthias tracks the herds' movements and adds a marketing tool to promote his family-run business. Previously, his 160-acre property didn't have internet access, but with TVWS and solar-powered cameras on his property, he now keeps tabs on the animals' behavior, breeding and health. What's more, he plans to soon stream a live feed of the animals—both as a way to attract more visitors and as a way to share these animals with those who can't see them in person.

The Airband Initiative and its community partners look forward to expanding these programs in Northeastern Michigan—and beyond.

"We now have steady internet for the first time," says Dave J. Post, village manager of Hillman, Michigan. "TV white space technology can provide the type of service rural America craves."

About our partners

Allband Communications aims to bridge the digital divide by providing telephone, 911 and broadband access to Northeastern Michigan.

Gigabit Library Network operates a collaboration of libraries in service of education and civic engagement.

Merit Network, Inc. operates the country's longest-running regional network and provides connectivity to all Michigan's public universities.

¹FCC 2018

²Microsoft, 2017

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