



## “THE MICHIGAN MOONSHOT”: EXPANDING COMMUNITY NETWORKS IN RURAL MICHIGAN

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### Why does so much of Michigan lack broadband internet access?

Access to, and use of, the internet has become an integral component of everyday life in the 21st century. Digital information has reshaped how individuals participate in nearly every dimension of society. Technology skills - enhanced by broadband networks and information access - are required to be successful in a modern workforce. Higher broadband deployment and adoption stimulates regional economic development and is associated with greater per capita income growth. Home values are increased when high-speed broadband is available. It is imperative for communities to leverage broadband network access for education, telemedicine, public safety and workforce development to maintain the quality of life.

According to the Wireless Innovation for Last Mile Access (WILMA) report, nearly 40% of rural America lacks access to broadband. Connectivity, even via wireless networks,

requires access to a backbone fiber optic network. In Michigan, rough terrain, including forests and dense substrates, makes physical infrastructure deployment both difficult and costly. Low population densities make economic return on investment problematic for commercial providers. Some rural areas of Michigan house as few as 2-20 individuals per square mile. Often, a for-profit organization cannot earn enough revenue to justify the costs of building a fiber connection to rural communities.

### Advantages of Community Broadband Access

Increased connectivity can be leveraged to alleviate the “homework gap,” which refers to the barriers that non-connected students face when being asked to complete homework assignments at home. In some rural communities where high-speed internet is not available to residents’ homes, parents and their children park their vehicles outside libraries and schools in the evening to use those organizations’ wifi networks to complete homework assignments from parking lots.

### Connecting Michigan’s Unserved Rural Communities

Barriers to broadband network deployment in rural communities could be reduced through a combination of techniques. The granting of one-time funds to supplement network construction costs, through governmental or philanthropic programs, would help jumpstart network expansion. The creation of community connectivity task force teams would accelerate broadband expansion by helping local communities that don’t have all the expertise they desperately need for these complex projects. Sharing information and success stories from community connectivity experts broadly would also facilitate efforts across the state. Michigan has wonderful talent, but it is not available in all communities. Planning grants to support these efforts would help launch local community initiatives. Furthermore, urging the FCC to allow the innovative use of fallow wireless TV “white space” spectrum - while simultaneously enhancing e-rate rules to help students with broadband connectivity in their homes - would help

narrow the “homework gap.”

An urban network upstart, Rocket Fiber, is taking on a self-described “Detroit Moonshot” by expanding fiber networks in our largest underserved urban area. **Let’s now also work together in innovative public/private partnerships to make connectivity for every rural Michigan resident the new “Michigan Moonshot” - propelling us all into our collective digital future, regardless of geography.**

### Merit - The nation’s first Research and Education Network

Research and education networks (RENs), like Merit, are an important part of telecommunications landscape. RENs are community-building organizations that leverage networking and other technology services to help advance that mission. We exist to make our statewide community stronger and more successful - while endeavoring to bring organizations together to collaborate, learn and experiment so that they can become stronger as they work to advance society.

Merit’s mission is “**connecting organizations and building community.**” We provide network, security and community services to member organizations that help make our state a better place to learn, discover, work and live – while upholding the principles of an open internet.

*For more information on Michigan’s Connectivity challenges, or to inquire about facilitating a community network in your area, contact Merit at:*

**[merit.edu/moonshot](http://merit.edu/moonshot)**

William H. Dutton, Mitch Shapiro, and Aleksander Yankelevich. Quello Center, Michigan State University. (January, 2017). Wireless Innovation for Last Mile Access (WILMA), Connecting Local Communities and Institutions

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