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JOURNAL REPORTS: TECHNOLOGY

The People Left Behind in a Broadband World

In southeastern Ohio, as in many rural areas, people aren't waiting for 5G. They're waiting for any broadband service at all

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Photo essay by Liz Moughon

Nick Tepe, director of Athens County Public Libraries in southeastern Ohio, often drives into the Nelsonville Library parking lot to see it dotted with cars occupied by passengers lit up by the light of their laptops and cellphones. Mr. Tepe keeps the library's Wi-Fi on 24/7 so that local students and professionals can study, work or simply catch up on social media whenever they have the time to do so. Half of the total Wi-Fi usage at the Nelsonville and Glouster libraries is during closed hours. For many people, this is their only option for internet connectivity.

The documentary "Do Not Pass Go" is screened at the Athens Public Library, about the efforts of a community in North Carolina to obtain widespread, fast, reliable internet service.

As Americans anticipate the arrival of 5G wireless technology—with superfast data-transmission speeds expected to enable everything from superior home internet service to long-imagined technological advances like self-driving cars—it's easy to forget that millions of people across the U.S. still have no broadband internet access in their homes.

Their numbers are shrinking but still substantial. According to a 2019 Federal Communications Commission report, 21.3 million Americans lacked a broadband internet connection at the end of 2017, down 18% from 26.1 million at the end of 2016. And most of the people who gained

broadband service in that year were in rural areas, the report said. But millions of people in rural America still have to go to extraordinary lengths to find the kind of internet access that most Americans take for granted.

This isn't just about not being able to play the latest videogames online or stream movies on a phone. For people without broadband connections, it's much harder to do things like conduct research for schoolwork, grow their own businesses or even find work online. On the path to a better life, it's at least a detour, if not a roadblock.

In these photos, the toll that such a disconnect takes on people in southeastern Ohio is clear, from students to working people to business owners.

Broadband Access for Students

Students without broadband access at home need to figure out a way to access online materials for schoolwork. Elijah Byrd, 16, a junior at Federal Hocking High School, uses a $55 unlimited data card for his phone, purchased for him monthly by his grandmother. Until recently, Libby Hall, 13, traveled 30 minutes with her mother after school to Ohio University where she could use the internet for schoolwork.

Libby's father, Greg Hall, is a closed-caption writer for live TV and works from home, so he requires the lion's share on the internet in the Hall household. In August, a local provider, Intelliwave, upgraded the Hall family's connection to a high-speed broadband, but it costs about three times more than their previous setup. The company gave the Halls a business account because Mr. Hall works from home.

Greg Hall reacts as his internet connection fails 20 minutes before he is supposed to closed-caption a live broadcast television program in November 2018. It sputters back to life minutes before his shift begins.

Business drawbacks

Nestled between idyllic meadows and rolling hills in Pomeroy, Ohio, is the Snowville Creamery dairy farm. In the 10 years since it was established, the business has grown and its milk, yogurt and cheese products are now available at Whole Foods stores in several states on the East Coast and in the Midwest. However, the farm faces operational obstacles without access to reliable internet service. With access to broadband, its owners could process data from bar codes on the company's products as orders are fulfilled, allowing the farm to streamline shipping and inventory tracking and make mistakes less likely.

Currently, employees hand count each item, as they load them into boxes and onto pallets for shipment, a time-consuming process that "frequently leaves room for error," says Tapan Alam, an engineer at Snowville Creamery.

Integration Acres in Albany, Ohio, also lacks broadband access. The farm sells walnuts and several other products online, but without broadband, productivity is hindered when processing online orders and communicating with customers.

Teaching sustainable living without Broadband

Jay and Annie Warmke live in a home made from mud, tires, wood, glass bottles and cans. Their

Snowville Creamery's operations are hampered by a lack of broadband access that would facilitate its expansion. On days when their current service is particularly slow, people working on the company's computers can spend an extra hour or more waiting for the internet to load.

'Hand counting thousands of cartons—I think that would be difficult for anyone.'

—Tapan Alam, engineer at Snowville Creamery

40-acre sustainable property is called Blue Rock

Nate Myers, an employee at the sustainable farm Integration Acres, hulls black walnuts. His wife and some of her friends say they could boost their income if they had broadband access that would allow them to work from home.
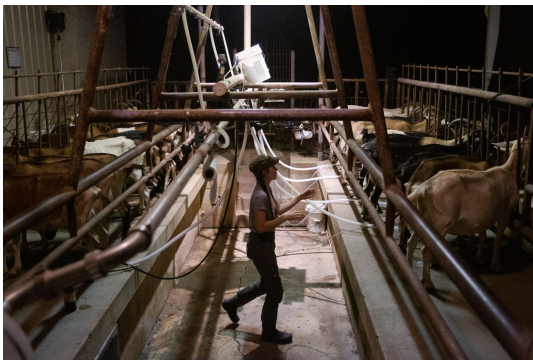
Megan Ogle, an employee at Integration Acres, milks goats. There is also an Airbnb on the property, but interested guests sometimes back out when they learn that it has no internet connection.

Station. Internet was a new concept when they bought the land in 1996, so they didn't foresee their personal need for it.

They are committed to educating others about sustainable living, which they do in part by giving tours of their property. But the lack of broadband at home makes spreading their message more difficult—the internet access they have can't support file uploads or downloads or video calls. To upload a podcast on sustainability that the couple recently recorded, Mr. Warmke traveled to a nearby library with Wi-Fi. Mr. Warmke's work also is hampered. One of his responsibilities working for the International Certification Accreditation Council is to

assess solar-industry certification programs. More often than not, this is done remotely, so he has conducted international videoconference calls from his car parked outside the library after it has closed.

Ms. Moughon is a photojournalist based in East Tennessee. She can be reached at

'If your motivation was to promote the economic activity in rural America, this would be the place you would start. There's a lot of us—we're just not clustered in one location.'

—Jay Warmke, on broadband access

Every morning the Warmkes sit outside their home and talk over his coffee and her tea. "If you talk to people who have access to internet, immediately it's a nonissue, 'cause it's like, 'Well, that's weird, I have it,' " says Mr. Warmke.

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