

# Communities, MDU Owners Overcome New Challenges to Narrow the Digital Divide

Last year, **BROADBAND COMMUNITIES** Summit attendees anticipated soon-to-flow federal and state money. This year, the Summit provided a space to prepare for those now in-process developments and covered issues well beyond the deployment of high-speed broadband. Affordability and access to training and devices were all part of a broad push toward digital inclusion and digital equity. Following are some highlights.

By Sean Buckley and Steve Ross / *Broadband Communities* and  
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## Gigi Sohn Sets Sights on Public Broadband Opportunities

**A**fter spending 16 months going through an FCC commissioner confirmation process, Gigi Sohn withdrew her nomination. She now looks forward to driving advocacy at the state and local levels.

In addition to serving as a Benton Senior Fellow and Public Advocate, Sohn was named the first executive director of the American Association of Public Broadband (AAPB), an organization championing community-led broadband networks.

“As the first executive director of the AAPB, [I think] it is a moment to expand how people think about public broadband,” she said. “When I mean people, I don’t just mean policymakers. I also mean the press and the public.”

Though there’s no doubt that sizable incumbent cable providers and telcos are the loudest voices that oppose community broadband, Sohn is confident she can help “change the conversation.”

She added, however, that community broadband isn’t a one-size-fits-all proposition. “I want to make sure that public broadband has the same opportunities as private broadband,” she said. “Public broadband is not a fit for every community, but there should be an option for a community to choose [its] broadband future.”

### FREEDOM OF CHOICE

Sohn’s move to become the executive director of the AAPB comes on the heels of Congress’s introduction of the Community Broadband Act of 2023 in April.

Sponsored by Sen. Cory Booker (D-NJ), the bill prohibits states from blocking broadband provision by public providers, public-private partnership providers or cooperatively organized providers.

In addition, public providers and state or local entities participating in a partnership must administer applicable ordinances and rules without discrimination against competing private providers.

Sohn said that though the bill’s passage is unlikely, it highlights communities’ desire to have broadband choices. Today, more than 17 states restrict how communities can choose what broadband their residents and businesses can have. “The politics are not there, but the action is not really at the federal level. It’s at the state and local level.”

### STATES ACT

The federal government is trying to move forward with new regulations to lift community broadband restrictions, but some states are already acting.

A case in point is Colorado, which recently voted to lift a ban on community broadband. Gov. Jared Polis signed a bill in early May giving the state’s local governments greater flexibility in creating municipal broadband networks.

The state is slated to receive \$400–\$700 million from the federal government’s Broadband, Equity, Access and Deployment (BEAD) Program, which requires states to describe their efforts to ensure that nontraditional broadband providers can compete for funding alongside incumbent providers.

Momentum for community-led broadband in Colorado has been growing. According to the Colorado Municipal League, a nonprofit organization representing 270 cities and towns in the state, 122 communities opted out of a 2005 bill that inhibited community broadband from 2008 to 2022. The law required every community wanting to build a broadband network to offer a ballot measure.

“In every Colorado community where a ballot was issued, community broadband won,” Sohn said. “At a certain point, such a requirement becomes a barrier that should not exist.”

Vermont created another model for community broadband. The state

is building Communications Utility Districts (CUDs), organizations of two or more towns that join as municipal entities to build communications infrastructure.

Today, 214 Vermont towns are members of CUDs, including

more than 76 percent of the state’s population and 93 percent of premises without access to 25/3 Mbps service. Six of Vermont’s 10 CUDs are currently under construction.

## Brownsville, Texas, Plots P3 Broadband Plan

To understand how dire the broadband situation has been in Brownsville, Texas, consider that a local high school valedictorian could not send her speech to the school principal because she could not access a broadband connection.

The young woman said that she asked neighbors for help and even tried to get a connection at a local fast food chain – to no avail.

“She said she knocked on her neighbor’s doors, but no one had internet,” said Elizabeth Walker, assistant city manager of Brownsville, during the “CLIC/AAPB/



Elizabeth Walker

Broadband Breakfast Supersession: Starting and Sustaining Successful Community Broadband Initiatives” session. “The young woman walked to McDonald’s and could not get the Wi-Fi connection to send the speech.”

Walker said this experience shows that the digital divide holds back young people who want to advance.

“The digital divide is genuine, and it is crushing the potential of the next generation of those who expect to lead us,” she said. “One of our best and brightest was prevented from delivering a speech despite all her hard work.”

Brownsville has had a reputation for poor internet service options. In its 2018 Worst Connected Cities list, the National Digital Inclusion Alliance (NDIA) listed Brownsville and Pharr, Texas, as the top two worst-connected cities: more than 65,000 people lack high-speed internet. Further, the NDIA found that in Brownsville, 47.1 percent

of households do not have broadband; in Pharr, that figure is 46.2 percent.

When the city polled residents, respondents reported “limited access” to broadband. Moreover, the city found that even if respondents could get broadband, they weren’t getting the level of service they thought they were paying for.

“A full third [of respondents] wrote into the notes comments about affordability,” Walker says. “It wasn’t enough to access internet service; [people also needed] the ability to afford it.”

This problem is not isolated to Brownsville and Pharr. It has been seen throughout Texas. According to the State of Texas Broadband Plan for 2022, “the sentiment was consistent: slow data speeds, unreliable access, affordability and coordination are critical areas of concern across Texas.”

### A P3 FOCUS

Brownsville is looking to change its broadband outlook. The city created a Digital Inclusion Taskforce, which worked with several local entities, including the city, the county, the school district, the local college, the economic development corporation and the seaport community.

To build the city’s last-mile and middle-mile networks, Brownsville partnered with Lit Communities, which provides complete solutions for building broadband infrastructure for communities. “We engaged in a public-private partnership [P3] in which we branded BTX Fiber, and we’re in the process of installing a middle-mile and fiber-to-the-premises network,” Walker said.

The city is investing \$19.5 million of ARPA funding in the middle-mile portion. As part of that, Lit Communities will oversee the network’s design, construction and operation/maintenance.

For the last-mile network, Lit Texas/BTX Fiber will invest \$70 million in private equity funding. BTX Fiber will build the previous-mile network “progressively” as the middle-mile network is built. The BTX Fiber service will be available to homes and businesses citywide.

“As we commence construction on the middle mile, which is based on a design-build methodology, we expect that on the heels of that, our last-mile partner is going to bring fiber to each premises,” Walker said. “We expect to light neighborhoods with fiber-based broadband as we go.”

She added that though the middle-mile network build will take “24 months, we expect in six months that the very first neighborhood will have access to BTX Fiber.”

### DRIVING COMPETITION

A key concern for Brownsville was giving residents and businesses better speeds and choices. This meant it had to adopt an open-access model. “It was crucial to the governing body in Brownsville,” Walker said. “The public-private partnership needed to preserve a competitive marketplace.”

This model allows other ISPs to connect to the middle mile that Brownsville will own and operate. “City leaders wanted to ensure there’s a competitive service offering to the last-mile consumer,” Walker said.

About 54 percent of the residents in Brownsville will be eligible for the

\$30-a-month Affordable Connectivity Program (ACP) broadband program. “We wanted to ensure that the

entry-level plan was the value of the ACP reimbursement,” Walker said. “We also wanted to make sure that

broadband, as we defined it as 100 Mbps symmetrical, would be available at no cost to those who qualify.”

## Andy Berke, RUS: Broadband Availability Should Not Dictate Where People Live

As the Rural Utilities Services (RUS) administrator at the U.S. Department of Agriculture (USDA), Andy Berke sees the rural broadband challenge firsthand.



Andy Berke

In rural areas, the need for broadband is not just about streaming channels but also about maintaining employment opportunities.

During the morning session on the first day of the Summit, Berke told the story of Pat, a call-center worker from Iowa.

When the pandemic hit, the call center was forced to let its workforce operate remotely. “Everything, including calls, comes over the internet, but her rural connectivity was bad,” Berke said. “Her employer gave her 90 days to fix the connectivity problem, or she would be fired.”

Eventually, Pat moved to the city because it had broadband. “This was the only choice she had to keep her job,” Berke said. “In 2023, people should not have to pick between the job they need and the place they love to live.”

### NOT A LUXURY

Though the amount of money allocated in RUS grants to target broadband continues to rise, the challenge of rural areas remains. The distance between homes was a fundamental problem in dedicating funding to providers. “Most of what RUS administrators dealt with were loans that made it financially difficult if you were doing a mile between different electric meters or houses,” Berke said.

Berke added, however, that people see broadband differently. “What has happened over the past few years is that there’s a growing consensus that the role of high-speed internet is changing,” he said. “We’re going from a role where people think broadband is a luxury to something more like a utility similar to water, electricity and roads.”

Despite the divide between political parties, Republicans and Democrats largely agree that federal investments must address the broadband availability gap.

In 2018, Congress changed the landscape for RUS with the ReConnect Loan and Grant Program, which offers grants, loan-grant combinations and low-interest loans for broadband infrastructure to connect rural families, businesses, farms, ranches, schools, libraries and public safety facilities to modern, high-speed internet. ReConnect funds can be used to construct, improve and acquire facilities that provide internet services to customer premises, with reliable technologies suitable for rural community high-speed internet use.

“ReConnect changes us from a place where we can make a few million-dollar awards to all of a sudden having \$10, \$15 and \$25 million grants that don’t have to be paid back,” Berke said. “As a result, the calculation for service providers can then change.”

Since ReConnect offered more money, Berke said, “We can now put in huge grants to rural America.”

### DRIVING EQUITY

The ReConnect program changed the ability to get more funding into rural areas, and President Biden upped the ante when he pledged in 2021 that every American should have affordable broadband access.

“As somebody who works in this space every day and gets to sit on these interagency councils, [I] take every word of this pledge seriously, especially the ‘every American’ part,” Berke said.

In Maine, the RUS awarded funding to islands with 50 people in the winter and 300 in the summer. Meanwhile, locations in New Mexico needed a physical address. “The goal remains the same: Every American should have access to affordable broadband internet,” Berke said.

The Biden Administration dedicated \$65 billion to broadband, including \$42 billion from the NTIA and the FCC’s pledge of \$14 billion to fund the ACP program.

RUS issued \$3 billion worth of grants. The agency provided \$1.1 billion for the fourth round of ReConnect, with the first grants just coming out. “[The RUS] is now part of a federal government infrastructure determined to meet President Biden’s broadband availability pledge,” Berke said.

He added that these new funding mechanisms impacted the RUS. “Not only are we focused on the grant, but we also play in the sandbox with all these other federal agencies and coordinate in the best way possible to deliver funding that people need to get the services,” Berke said.

The RUS sees driving access, affordability and devices as part of its role. To access ReConnect funds, a provider must agree to participate in the ACP program, which raises the bar for digital equity. “There’s a growing consensus that the importance of broadband is not just about access but also about fairness and equity,” Berke said.

# Digital C's Joshua Edmonds: We Need to Protect the ACP Program to Ensure Broadband Equity

Joshua Edmonds, CEO of Digital C – a champion in driving broadband equity – warns that the broadband industry can't allow the FCC's ACP benefits program to run out of funds.



Joshua Edmonds

Service providers have the talent to build innovative fiber and wireless networks, which Edmonds says is “the most innovative thing we can do to take care of our people.”

As the youngest of three children, Edmonds and his brother fought constantly. The one rule was that they could not hit each other in the face. He likens the fight about preserving the ACP to his family situation.

Though there will be battles over various issues, such as technology

and networks, the focus of the ACP program should be on how to treat others. “If the ACP program is not renewed, we will have a black eye that we will not be able to cover up,” Edmonds said during the opening keynote speech at the Summit.

He adds that the “ACP is something to unify everyone, and advocacy has to be collective.”

## FOCUS ON AFFORDABILITY

As the FCC's Emergency Broadband Benefit Program (EBB) program ended in 2021, migration to the ACP benefit program began.

Edmonds said the broadband industry sees the “alignment from grassroots and grass tops.” Earlier, Edmonds helped create an outreach program in Detroit to help residents sign up for the EBB program with a call center that provided guidance.

Regardless, even in 2022, people were still skeptical about the ACP program because of social inequality. Many people did not trust the government.

What *did* change was that in 2022, ARPA funding was made more available. It was also used to complement ACP efforts.

“You have people saying, ‘we understand affordability is our chief concern; we’ll authorize ARPA funding to build networks for affordability,’” Edmonds said. “People recognize affordability and network building go hand in hand.”

## CREATIVE USAGE

The ACP program isn't without its challenges, however. What emerges as more consumers get ACP plans is that they use connectivity on their phones.

“The big challenge we started to see is the number of people using

## INDUSTRY PERSPECTIVES

“Managed Wi-Fi does not fit every solution, so I sell bulk services and managed Wi-Fi.”

– Scott Buehrle, vice president of multifamily sales and strategy, Frontier

“There's not much difference between managed Wi-Fi and bulk services.”

– Josh Lunsford, assistant vice president of strategy and enablement, Cox Communities

“The best Wi-Fi signal will come from proper placement, usually on the ceiling in a central location.”

– Zack Ebner, senior manager, product management, MDU/MTU, Quantum Fiber/Lumen

“We're getting the best input from the technicians in the field.”

– Michael Solitro, founder and CEO, Sertex Broadband Solutions

“We hire for attitude and train for aptitude.”

– Gene Counts, CEO, Velox

“Getting a phone call or an e-mail from a CEO thanking you for the quality of work you do means everything.”

– Britni Cuington, member, Communications Workers of America (CWA)

“You need to take care of customers and spend a half year to ensure they are happy.”

– Christopher Merrell, chairman, Communications Consulting Group

“Bulk internet allows you to have internet connectivity in every part of a community, including amenity spaces.”

– Bryan Rader, president of MDU, Pavlov Media

“We're seeing more and more retail Wi-Fi.”

– Erik Spring, vice president of sales, BAI Connect

“Workforce development remains a key issue.”

– Marissa Mitrovich, vice president of public policy, Fiber Broadband Association

ACP on their cellphones,” Edmonds said. “This was home internet at \$30 a month, but most residents used it on their cellphones. If more people in this country feel more comfortable using the program on their cellphones, there’s still a cost reduction.”

Digital C provides a fixed wireless solution and has been creative. The organization works with local banks to create a matching opportunity in Cleveland. “Local banks have created a subsidy [in which] residents can use their cellphones for ACP, but they can use a subsidy from a local bank for their local internet,” Edmonds said. “ACP is an invitation for other sectors to step up

and put their money where their mouth is in the name of digital equity.”

## ACP/ARPA DISCONNECT

Though the BEAD Program and ARPA funding are set on providing a foundation for new networks, the stark reality is that the networks these programs support won’t be ready when ACP expires. “The promise of BEAD is phenomenal,” Edmonds said. “These new networks will be great, but there’s a pressing need today.”

Edmonds has been outspoken about the EBB and the ACP programs. After he complained about the EBB, FCC

Chairwoman Jessica Rosenworcel met with Edmonds in Detroit. “The EBB enrollment process was too cumbersome,” Edmonds said. “I felt like it was the government’s way of saying [it was] doing the best [it] could at the time.”

Nevertheless, Edmonds said, though there are things he did not like about ACP and EBB, the value is still there. “Getting everyone to agree on something is not easy. What we *can* agree on is we have a real affordability challenge in this country, and if we’re going to look at how the internet is integral to every life function, we do need an onramp to be sustained.”

## Multifamily Digital Equity Remains a Challenge

Though many digital equity efforts have focused on rural areas, many low-income multifamily communities are rightly eligible for funding under the BEAD Program and subsidies such as the ACP.

Accessing the funds is challenging, but the need for broadband connectivity in low-income housing is pressing.

A recent report conducted by Pew Research, created through interviews with broadband and housing experts, found that addressing residents’ broadband access challenges “was already becoming a priority for affordable housing providers before 2020, but the COVID-19 pandemic made it a necessity as Americans pivoted to online work, learning, health care services, social events and other essential activities.”

### WEIGHING AVAILABILITY, AFFORDABILITY

What’s clear about the multifamily market, particularly for low-income families, is that a large majority can’t get or afford internet access.

According to Pew, in 2021, 43 percent of adults with annual household incomes less than \$30,000 did not have a home broadband subscription, compared with just 8 percent of those with more than \$75,000 a year.

National CORE – a nonprofit affordable housing developer – found that 60 percent of its residents can’t connect to the internet. To gauge broadband availability and costs, National CORE created an application.

Courtney Richard, vice president of relocation and property management at National CORE, said it needed to understand its residents’

perspectives. “Sometimes we sit in a room and come up with ideas for our residents, and it does not go well,” she said. “This time, we started to conduct focus groups with our residents on what they want to see on the resident app.”

She added, “We found that many don’t have internet access at home. The only way they can connect is by entering the property’s common areas.”

Bryan Mauk, chief innovation officer at PCs for People, found a similar situation: 50 percent of the residents it



Courtney Richard



Bryan Mauk

represents do not have internet access, and 60 percent do not own a computer or any internet-enabled device. PCs for People takes a multipronged approach to providing connectivity: It builds its network connectivity or partners with a local ISP.

The provider’s call center, which offers advice on how to connect a computer to the internet and other services, gets about 1,000 calls daily. “We can help people get a laptop computer to get connected and also stay connected,” Mauk said. “When we connect people to the internet, we have a white glove service to help them connect a Roku device to their Wi-Fi routers.”

Another critical issue that prevents residents in low-income housing from accessing broadband is older buildings’ wiring conditions.

Brandon Gibson, co-founder and senior vice president of real estate for Flume Internet, said most incumbent ISPs have not made significant upgrades, including deploying fiber, to brownfield markets. “One thing we’re seeing is incumbents are not building fiber to



Brandon Gibson

brownfield to the same extent they are building for greenfield, which creates a major problem for metro areas such as New York City, where so many people in multifamily buildings are stuck with old DSL copper wiring,” Gibson said. “We’re seeing problems [in which] people are not connected or are severely under-connected.”

Flume offers two fiber broadband tiers – 200 Mbps and 1 Gbps – in four markets. The provider struck an anchor agreement with the New York City Housing Authority to offer fiber-based broadband to 6,000 units in the Lower East Side neighborhood of the city.

But getting there took work. “New York City’s public housing is a beast,” Gibson said. “The physical infrastructure of the buildings is challenging, and we realized having fiber to the home was a silver bullet for the complex because residents could access 1 Gbps at an affordable price with ACP.”

## ACP CHALLENGES AHEAD

A key consideration for the low-income family market is the advent of the ACP

benefit. Like the food stamp program, ACP provides low-income people a \$30 monthly credit for broadband service. It also provides a \$100 device credit.

PCs for People found that low-income families have about \$15 monthly to spend on internet access. When it increased the price of its \$12 plan to \$15 a month, it lost about 20 percent of its customers. “The reality for many families is that they have to choose between food, shelter and the internet,” Mauk said. “What ACP allows is taking that \$15 and adding \$30, and at \$45, [people] can get something in the marketplace.”

He adds that the ACP “encourages ISPs to build into communities where there’s more affordability, which is why we must keep it going.”

Gibson said the ACP needs to be renewed because getting people to participate in a new program will be challenging. “It’s important to renew the program,” he said. “If this were to expire and something new comes along, it is an uphill battle to convince people in these complexes to subscribe to a

new program because they don’t trust the government.”

However, Dick Sherwin, CEO of SpotOn Networks, said there are ways to keep the ACP plan alive. “If a municipality gets BEAD funding, a creative service provider could combine five years of service with the implementation fee and put together for the property,” he said. “The property would not have to pay a dime more than it already paid as part of the BEAD funding.”

Gibson envisions an even more radical approach. He advocates that more communities can look to build open-access fiber networks. “Cities should seek to own their fiber infrastructure and create more open-access networks that are carrier agnostic to create more competition,” he said. “This creates more opportunities for affordable and accessible internet.”



Dick Sherwin

## Product Showcase

### ETI’s OSS/BSS Platform Offers Broadband Providers a Single Management Pane

ETI Software Solutions ([www.etisoftware.com](http://www.etisoftware.com)) launched an intelligent OSS/BSS platform to help broadband providers streamline their operations and create more engaging customer experiences. Built on Microsoft Dynamics 365, ETI’s OSS/BSS platform allows broadband providers to manage their operations, finances, customer relationships and other core functions from a single platform with artificial intelligence and machine learning assistance to automate processes and gain insights from data.

### Bell Lumber & Pole Targets Low-Maintenance Cell Towers

Bell Lumber & Pole’s line of laminated wood utility and lighting poles ([www.blpole.com](http://www.blpole.com)) now includes



Bell Lumber & Pole low-maintenance cell towers

bars as long as 180 feet, perfect for low-maintenance cell towers. All its products are made from renewable wood species and are safely pressure-treated to meet or exceed customer treating standards and applicable national treating standards defined

by the American Wood Protection Association, Rural Utility Service and Canadian Wood Preservers Association.

### Render Pivots Platform to Support Operations and Maintenance

Render ([www.rendernetworks.com](http://www.rendernetworks.com)) extended its platform to include select network operations and maintenance support. The expanded offering enables operators to expedite customer connections and seamlessly maintain and enhance the integrity of geospatial network records throughout the network life cycle. The vendor claims it can improve the quality and operability of data from initial deployment through to customer connection drops and ongoing maintenance works across various strands: proactive maintenance and customer drops, adds, moves and changes.



Hexatronix puts a new twist on fiber distribution.

**Hexatronix Simplifies Fiber Cable Management**

This new twist in fiber distribution from Hexatronix ([www.hexatronix.com](http://www.hexatronix.com)) allows deployers to use cheaper and often more-available multiple low-strand-count fiber cables in a single duct and keep easy track of them with color-coded, straw-like mini-ducts inside.

**Clearfield's SeeChange Accelerates Deployment Timelines**

The SeeChange Terminal is Clearfield's ([www.seeclearfield.com](http://www.seeclearfield.com)) small, carrier-



Clearfield's SeeChange Terminal



R&M's versatile splice and fiber tray system

grade, plug-and-play access terminal for use in FTTx applications. Its small size makes it an attractive choice to deliver fiber to cell towers and inside 5G decorative poles – the terminal interfaces incoming feeder fiber and single fiber drop cables.

**R&M Debuts Splice, Fiber Tray**

The remarkably versatile splice and fiber tray system from R&M USA ([www.rdm.com](http://www.rdm.com)) has a segmented, easily adaptable base plate system. 🙌



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