

Innovation in Broadband Technologies

Broadband deployment technologies are moving beyond traditional buried fiber and transmitter towers. High-throughput satellites, for example, rely on frequency re-use and spot beam technology to produce increased output factors upward of 20 times that of traditional satellites. This offers speeds from 10 gigabits per second (Gbps) in 2008 to 260 Gbps today.

Technology start-up OptiPulse, Inc., uses its proprietary laser chips to offer wireless internet at 100 times the speed of today's networks and potentially half the cost of deployment. The optical network uses laser-emitting stations, or transceivers, arranged for node-to-node transmissions that directly route signals through the most-efficient path to end users. This results in point-to-point data transmission at over 10 Gbps.

With traditional tower-based networks, terrain or buildings can block the signal and cause dead spots. Also, the farther the use from the tower, the weaker the signal. However, Mage Networks uses transmitters in strategic locations to distribute the data from central locations. This allows multiple signals in multiple directions, intelligently choosing whichever routes will avoid obstacles and interference.

Innovation has even given fiber broadband deployments new life. Stillwater, Okla., and Fauquier County, Va., are gluing fiber to hard surfaces such as streets and parking lots. A D.C.-based startup called TRAXyL is using methyl methacrylate (MMA), a stronger version of substance used for painting for traffic markings.

Learn more about innovation in broadband technologies during the September 19, 2018 webinar, [Innovative and Emerging Broadband Technologies: Providing Economical Alternatives for Rural Broadband Access](#).

Broadband News and Updates

Federal News

- [FCC Seeks Comment on Launching Connected Care Pilot Program](#)
- [Rural Broadband's Only Hope: Thinking Outside the Box?](#)
- [Most Americans Continue to Have Privacy and Security Concerns, NTIA Survey Finds](#)
- [NTIA and the National Highway Traffic Safety Administration \(NHTSA\): 911 Grant Program: Final rule: correcting amendments](#)
- [USDA Seeks Input on \\$600 Million E-Connectivity Pilot for Rural Broadband Funding](#)
- [FCC Chairman Pai: Extending Challenge Window Would Better Target Allocation of Up To \\$4.53 Billion for Mobile Broadband Deployment in Unserved Rural Areas](#)
- [FCC Floats Ideas to Fill In Wireless Dead Zones](#)
- [FCC's State Broadband Model Remains a Work in Progress](#)
- [Precision Agricultural Bill Advances in US House](#)
- [Libraries are Filling the Homework Gap as Students Head Back to School](#)
- [USDA Launches Webpage Highlighting Resources to Help](#)

State News

- [States with the fastest internet speeds](#)
- Alabama: [Experts, legislators talk importance of broadband](#)
- Delaware: [Delaware is looking for a partner to expand rural broadband](#)
- Indiana: [Town manager hired as state's director of broadband opportunities](#) and [Indiana Broadband: State Commits \\$100M; New Study Shows Value of High-Speed Access](#)
- Kansas: [Grant Approved to Help Improve Broadband Coverage in Kansas](#)
- Maine: [Study: Maine Has Average Broadband Access for U.S., but Lags behind the Rest of New England](#)
- Michigan: [Governor announces broadband Internet for entire state](#)
- South Carolina: [Telehealth Network to Benefit from Broadband Funds](#)
- South Dakota: [Broadband Access Expanding in Rural South Dakota](#)
- Wisconsin: [The Ongoing Pursuit of Better Broadband Access In Rural Wisconsin](#)
- West Virginia: [Providers competing for \\$1.98B in broadband funds](#)
- Wyoming: [Draft of State Broadband Improvement Plan Released](#) and [Wyoming Business Council hires Broadband Manager](#)

Public Safety/FirstNet

- [Early Benefits of FirstNet: Priority and Preemption](#)
- [FirstNet Board Takes Action on FY19 Budget to Advance Public Safety Advocacy, Network Deployment, Reinvestment](#)
- [Swenson, Johnson Resign from FirstNet Board, 7 Positions to Fill](#)
- [FirstNet helps public works agencies coordinate with public safety partners for unified response to emergencies](#)

Smart Community and 5G News

- [NITRD Release Federal Smart Cities and Communities Programs Resource Guide for federally funded R&D programs](#)

Digital Inclusion

- [Spectrum Digital Education Grants](#)
- [NCDE: Guide to CRA Grantmaking for Digital Equity and Economic Inclusion](#) (PDF)
- [Low income veterans are now be eligible for Comcast Internet Essentials](#)

Funding

- [U.S. Department of Commerce, U.S. Department of Transportation Issue Final Rules for \\$110 Million NG911 Grant Program](#)
- [Commissioner Carr Announces \\$100 Million 'Connected Care Pilot Program' \(PDF\)](#)
- [USDA Rural Community Development Initiative Grants](#)
- [HUD Awards Choice Neighborhoods Planning Grants \(PDF\)](#)

Resources

- [Consortium for School Network \(CoSN\) Digital Equity Initiative Toolkit](#)
- [NRECA: The Value of a Broadband Backbone for America's Electric Cooperatives: A Benefit Assessment Study](#) (PDF)
- [NTCA Rural Anchor Institution Fiber Connectivity Report: 82.4% of Schools Served by Rural Telcos Have FTTP](#)
- [PEW: Broadband Research Initiative Website](#)
- [Facebook Launched a Digital Literacy Library](#)
- [Preparing Workers for the Expanding Digital Economy](#) (PDF)
- [Report: Broadband access would benefit rural areas, states](#)

General News

- [By Gluing Fiber to the Ground, Startup Thinks It Can Slash Broadband Installation Costs for Local Government](#)
- [AI Startups Promise to Help Disaster Relief and Evacuation](#)
- [Investing in America's Workforce: Improving Outcomes for Workers and Employers](#) (PDF)
- [National League of Cities: How the FCC's Broadband Deployment Advisory Committee Could Shape Cities' Digital Future](#)
- [Investing in America's Workforce: Improving Outcomes for Workers and Employers](#)
- [Groups Launch Broadband Connects America Coalition to End Rural Digital Divide](#)

BroadbandUSA Spotlight

Most Americans Continue to Have Privacy and Security Concerns, NTIA Survey Finds

Privacy and security online continue to be major issues for Americans, according to an NTIA survey conducted by the U.S. Census Bureau. Nearly three-quarters of Internet-using households had significant concerns about online privacy and security risks in 2017, while a third said these worries caused them to hold back from some online activities. About 20 percent said they had experienced an online security breach, identity theft, or a similar crime during the past year. However, the 2017 survey showed a decline in households reporting concerns and avoiding certain online activities compared with the 2015 survey, which first asked these questions. The proportion of online households reporting privacy or security concerns fell from 84 percent to 73 percent during this period. Similarly, the proportion of online households that said privacy concerns stopped them from doing certain online activities dropped from 45 percent to 33 percent. [See the complete NTIA blog here.](#)

Events

NTIA Events

September 19, 2018

[Innovative and Emerging Broadband Technologies: Providing Economical Alternatives for Rural Broadband Access](#) (See details in column on right.)

October 30, 2018

[BroadbandUSA and the Center for Innovative Technology \(CIT\) Virginia Broadband Summit](#), Roanoke, VA. (See details in column on right.)

Events of Interest

September 6-7, 2018

[Smart Agriculture and Rural Broadband SuperCluster, GCTC -Smart and Secure Cities and Communities Challenge](#), West Lafayette, IN. Participants will learn about funding opportunities, a showcase of smart ag and rural projects and actively participate in writing a blueprint document. BroadbandUSA Speaker: Jean Rice

September 13, 2018

[WSRD Workshop X: Security from a Wireless Spectrum Perspective](#), Washington, D.C. The Wireless Spectrum R&D Interagency Working Group (WSRD) will conduct a workshop, "Security from a Wireless Spectrum Perspective: Technology Innovation and Policy Research Needs."

September 16-19, 2018

[HBCU Competitiveness: Aligning Institutional Missions with America's Priorities](#), Washington, DC. The annual National Historically Black Colleges and Universities (HBCUs) Week Conference is planned under the direction of the White House Initiative on HBCUs and with input from the Chairman of the President's Board of Advisors on HBCUs and other supporters. BroadbandUSA Speaker: Francine Alkisswani

September 20, 2018

[2018 Georgia Broadband Summit hosted by the Georgia Municipal Association \(GMA\)](#) "Federal Funding Programs Panel", Warner Robins, GA. GMA will host a one-day statewide Rural Broadband Summit to share information with local officials about rural broadband planning in Georgia. BroadbandUSA staff Andy Spurgeon, Don Williams and Scott Woods will be providing sessions on planning and funding broadband projects.

September 23-26, 2018

[104th ICMA Annual Conference](#), Baltimore, MD. The ICMA Annual Conference is the largest annual event in the world for local government managers and staff. This is a forum for pursuing the common task of building sustainable communities and improving the lives of people worldwide. Visit the BroadbandUSA booth.

September 24-26, 2018

[Great Lakes Connect Broadband Development Conference](#), Fairlawn, OH. The focus is on collaborative community projects throughout the Midwest, and local network infrastructure and economic achievement and tracks include community development, intelligent communities, telehealth/education, and wireless.

Webinars

BroadbandUSA Practical Broadband Conversations Webinar Series

Topic: [Innovative and Emerging Broadband Technologies: Providing Economical Alternatives for Rural Broadband Access](#)

Date: Wednesday, Sept. 19, 2018

Time: 2:00 PM Eastern

We will discuss new, emerging and innovative wireless technologies currently being tested and/or deployed to address rural broadband challenges.

Our scheduled speakers include:

- Mathis Shinnick, Chief Executive Officer, OptiPulse, Inc.; & John Joseph, Founder, Inventor and President, OptiPulse, Inc.
- Therese Jones, Senior Director of Policy, Satellite Industry Association
- Keith Walker, Chief Executive Officer, AER Wireless & Dr. Sisso El-Hamamsy, Chief Executive Officer, Mage Networks

Want to access past Practical Broadband Conversations webinars?

Visit our [Webinar Archives](#) for past presentations, transcripts and audio recordings.

Events

BroadbandUSA and the Center for Innovative Technology (CIT) Virginia Broadband Summit

Date: October 30, 2018

Time: 8:30 a.m. to 4:00 p.m., ET

Location: Roanoke, VA.

The purpose of the summit is to gather information from the public and stakeholders on how to accelerate broadband connectivity, improve digital inclusion, and support local priorities. The summit will provide information on topics including local broadband planning, funding and engagement with service providers. Speakers and attendees from Virginia, federal agencies and across the country will explore ways to facilitate the expansion of broadband capacity, access, and utilization.

The summit will be held at the [Roanoke South County Library](#), 6303 Merriman Road, Roanoke, VA 24018.

[Pre-registration is requested](#) as space is limited.




NTIA's BroadbandUSA program promotes innovation and economic growth by supporting efforts to expand broadband connectivity and digital inclusion across America. In this role, BroadbandUSA serves state and local government, industry and non-profits that want to expand broadband infrastructure and promote digital inclusion.


Contact Us

If you are interested in receiving technical assistance, please send an email to broadbandusa@ntia.doc.gov or call 202-482-2048. For more information, visit our website at www.broadbandusa.ntia.doc.gov.

Follow us online:

 www.facebook.com/ntia.gov

 www.twitter.com/ntia.gov

 www.youtube.com/ntia.gov

To be removed from the BroadbandUSA mailing list, please contact BroadbandUSA@ntia.doc.gov

September 26, 2018

[The Quilt Fall Member Meeting](#), College Park, MD. Through The Quilt, non-profit regional research and education networks collaborate to develop, deploy and operate advanced cyberinfrastructure that enables innovation in research and education. BroadbandUSA Speaker: Jean Rice

October 18, 2018

[Indiana Philanthropy Alliance: 2018 Broadband Summit](#), Danville, IN. This summit will provide information on topics including local broadband planning, funding and engagement with service providers. BroadbandUSA Speaker: Scott Woods

October 23 – 5, 2018

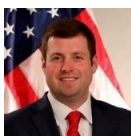
[Infrastructure Assistance Coordinating Council \(IACC\) Conference](#), Wenatchee, WA. This event will focus on identifying the funding and support needed to execute infrastructure projects. This year's agenda features more broadband sessions and highlights Washington States new broadband grant and loan program. BroadbandUSA Speaker: Karen Perry

November 8, 2018

[New England Connect](#), Hartford, CT. Conference will focus on local Solutions for broadband development. Event is hosted by Next Century Cities in partnership with the State of Connecticut Office of Consumer Counsel.

Policy Corner: Moving Forward with 911 Grants

by *David Redl, Assistant Secretary for Communications and Information and NTIA Administrator*



On August 10, NTIA and the National Highway Traffic Safety Administration (NHTSA) announced the opening of the 911 Grant Program, which will provide as much as \$110 million to help 911 call centers across the country upgrade equipment and operations to Next Generation (NG911) capabilities. With these upgrades, citizens, first responders, and 911 call-takers will be able to use modern communications technology – such as text messaging and video calls – during emergencies. NG911 will improve coordination and allow first responders to quickly connect with key health and government services. It will also enable 911 calls to contain real-time caller location and emergency information.

[See the complete blog here.](#)