



April 17, 2020

The Honorable Mitch McConnell
Majority Leader
U.S. Senate
Washington, DC 20510

The Honorable Charles Schumer
Democratic Leader
U.S. Senate
Washington, DC 20510

Dear Majority Leader McConnell and Democratic Leader Schumer:

On behalf of the U.S. research and education (R&E) networking community, we are writing to ask that you consider how R&E networks are contributing today and will continue to contribute to our country's response to the coronavirus (COVID-19) pandemic.

U.S. R&E networks, including Internet2 and The Quilt, a coalition of 40 regional and state networks, have a distinct and vital role in our country's internet landscape.¹ U.S. higher education institutions rely on R&E networks to give them a competitive edge in the most impactful scientific research initiatives that are essential in the COVID-19 crisis. We bridge the educational institutions that support university medical centers and their associated hospitals. Our networks interconnect with federal agencies, as well as national labs and their mission-driven science networks to further scientific discovery. R&E networks also connect tens of thousands of community anchor institutions, including K-12 schools, public libraries, local and state government, research sites, cultural institutions, public safety, and tribal lands. Access to these institutions is even more necessary at this time for expanded online learning, medical treatment and research, and community infrastructure. We are trusted, agile, and responsive partners that have been providing critical infrastructure to address immediate needs, like those of first responders and pandemic researchers. In addition, we have a proven track record of effective and equitable use of resources, and pursue partnerships per mission instead of profit.

As mission-driven organizations, R&E networks are uniquely positioned to forge long-lasting and successful public-private network partnerships, thereby helping to expand private sector business through broadband access in unserved and underserved areas. We partner with a wide range of entities, which include commercial telecommunications providers, rural telephone cooperatives, rural electric cooperatives, state departments of transportation, tribal governments, and others. We are a vital part of our country's toolbox to bridge community broadband gaps and support academic research.

¹ U.S. R&E networks, as used herein, are mission-driven non-profit organizations, divisions of public universities, or divisions of state government. These organizations operate private networks that offer specialized, high-capacity data and related services, including interconnection with other federal agency mission-driven science networks. These organizations are governed by representatives of entities that use the networks, such as higher education, research organizations, state officials, and community anchor institutions.



As a result, Congress should provide federal funding to the R&E networking community to fill the gaps exposed due to the COVID-19 crisis and expand these types of public-private partnerships to rapidly bolster our country's broadband and research infrastructure as identified below.

- **Support Public-Private Partnerships to Extend Backbone and Middle Mile Networks in Unserved and Underserved Areas:** Immediate backbone and middle mile funding will enable accelerated development of increased broadband capacity to these areas and provide the foundation for affordable wired or wireless last mile connectivity for these communities. This approach is designed to reduce the distance for last mile connections. By lowering the cost of the last mile, R&E networks, working with partners, will be able to justify their return on investments in these areas. By working with R&E networks that are experienced in quickly executing shovel-ready projects, this approach will create the capacity needed to support last mile services for distance learning, telehealth, telework, and a variety of other services that will be required by Americans now more than ever. This would allow communities to deliver more services to citizens while optimizing public investments in collaboration with private investment for optimal solutions, which may vary depending on a community's geography and density.
- **Increase Pandemic Research Connectivity:** Among the many organizations already working on a vaccine for COVID-19 are the country's top research universities and their academic medical centers that collaborate with the federal government and private sector biomedical researchers. Traditionally, R&E networks, both domestically and abroad, have provided specially designed networks for genomics and clinical research necessary to secure and share very large data sets among distributed collaborators. With the global pandemic, the need for R&E networks is even greater. These networks enable pandemic research by connecting researchers to our country's computing resources and operations to support the secure processing of data associated with pandemic research and responses. Federal investment in R&E networks would enhance, foster, and accelerate this research collaboration.
- **Expand Educational Wireless Systems and Wireless Services:** As more students begin online instruction and more healthcare screening is conducted via telemedicine, it is crucial to provide federal assistance to support the expansion of educational wireless systems and wireless services to enhance broadband access, security, and privacy. The Federal Communications Commission (FCC) should be directed to allocate wireless spectrum to educational organizations and R&E networks. Unless there is intervention,



the loss of Educational Broadband Service spectrum to private auction means there no longer will be a dedicated spectrum asset to leverage for educational purposes. Citizens Broadband Radio Service spectrum (CBRS) also will be reallocated by auction soon for licensed blocks of the spectrum by census tract called Priority Access Licenses. To sustain support for remote learning, the FCC should dedicate a portion of the Priority Access Licenses for education.

- **Support Equipment and Capacity Needs:** Congress should provide immediate funding for network equipment, upgrades, maintenance, licenses, and operating expenses associated with network services to backfill necessary, but unplanned, investments, made to support COVID-19 responses in R&E networks, as well as futureproof these networks and critical internet capacity exchanges. This should fund not only local efforts with the state and regional networks but also allow support for Internet2's national and international equipment and capacity needs that bridge national networks and government resources, and accept international research contributions in collaboration with the state and regional networks.

On behalf of the U.S. R&E networking community, we urge you to leverage the full capabilities of our mission-built networks to help address our country's critical broadband connectivity gaps exposed in the COVID-19 pandemic. The communities we serve require help. Urban and rural school districts are not able to convene online learning because student internet access is not ubiquitous. Patients who should not travel to healthcare providers do not have the capabilities to be treated via telemedicine.

R&E networks are beginning to address these challenges daily in many ways. We are connecting school districts with students shifting to remote learning; remote university faculty and students to digital campus resources; emergency field hospital sites to main hospitals and each other; healthcare providers with patients; pandemic researchers with academic medicine resources; and biomedical research to supercomputing centers. However, we will be called upon to do so much more as the pandemic continues and beyond, while we are confronted with the lack of resources described in this letter. Together, our community stands ready to support the nation's R&E needs in confronting this virus while also helping Americans address broadband gaps as they adapt to changes in their daily lives.



The R&E networking community appreciates your consideration of these requests and looks forward to working with you to help tackle this quickly evolving situation.

University Corporation for Advanced
Internet Development ("Internet2")

The Quilt

A handwritten signature in black ink that reads "John S. Morabito".

A handwritten signature in black ink that reads "Jennifer L. Leasure".

John S. Morabito
Vice President of External Relations

Jennifer Leasure
President

cc:

Chairman Roger Wicker
Committee on Commerce, Science, & Transportation

Ranking Member Maria Cantwell
Committee on Commerce, Science, & Transportation

Chairman Lamar Alexander
Committee on Health, Education, Labor, & Pensions

Ranking Member Patty Murray
Committee on Health, Education, Labor, & Pensions