

**Prepared Remarks of Commissioner Mignon L. Clyburn  
Internet2 Spring Member Meeting  
Arlington, VA  
April 20, 2011**

Thank you, Dave, for that kind introduction and for the invitation to speak here today at the Spring Member Meeting. I am even more appreciative in that it is actually beginning to feel like spring!

I am delighted to address this audience because the Internet2 community has played such an important role in promoting three policy initiatives that are particularly important to me – accessibility, affordability, and adoption. By accessibility, I mean giving people living with disabilities greater access to the most advanced communications services. But, I also mean bringing advanced communications services to communities that are unserved or underserved. In my view, these three terms – accessibility, affordability, and adoption – are interrelated. In other words, if we create incentives for more service providers to deploy networks in underserved areas, this should lead to competition, which should make services more affordable. More affordable services, in turn, encourage more consumers to adopt advanced communications services such as broadband.

As many of you know, South Carolina is home for me and is a state with a number of very rural communities. I personally understand the significant need for the successful implementation of all three of these initiatives. Consumers, especially low income consumers, must be able to access the benefits provided by broadband Internet service. Each year, there is an increase in the number of both public and private organizations that are relying exclusively on the Internet to both notify the public about job openings and to accept and consider applications. Universities are also forgoing paper-based application systems. Healthcare systems across the country are quickly beginning to transition into the digital world.

The lesson from these trends is clear. Without access to affordable IP-based broadband service, the most challenged communities will fail to enjoy the significant opportunities that broadband service access has offer.

During my time at the Commission, I have seen how projects to wire anchor institutions can not only bring the benefits of broadband service to low income communities, but also stimulate economic growth in those communities. I have learned of several major research programs, including the Case Western Reserve University project, which recently provided 1 Gigabit per second access to low income communities in Cleveland, Ohio. I am also aware of the Rutgers University GENI project, a program that fosters web infrastructure research on both wired and wireless networks. These community-connect projects are proven vehicles for job creation in low income communities. Therefore, we should promote as many of these projects as possible.

Internet2 has shown great leadership on these policy initiatives because of its tremendous contribution to the deployment and improvement of broadband services for thousands of communities nationwide. Over the past 15 years, the Research and Education, or R and E networking model, has been extended to cover over 66,000 anchor sites, and a great number of these organizations represent those most vital to our society. Whether connecting to a state's health network, such as Health Sciences South Carolina, an 8<sup>th</sup> grade middle school classroom, or a Smithsonian Museum here in DC, Internet2 has consistently been able to deliver user connectivity through some of our most fundamental institutions. Through the diligent efforts of

the Internet2 community and its partners, these entities can provide their important services to more citizens around the country.

Internet2 deserves great credit for working so diligently to connect so many anchor institutions to R&E networks. But I also want to commend the Internet2 community and its partners, for the approach it has taken to the deployment of these networks. As the Internet2 Strategic Vision explains, one of the goals of this community is to serve “as an exemplary membership organization with empowered leadership, financial transparency, and member engagement, to achieve the membership's shared objectives.”

This collaborative approach, serves the public interest in a number of ways. First, it allows partners to learn from each other's experiences in broadband deployment, and to assist each other in discovering how to work around challenges to deployment. This approach also enables local communities to tailor R&E networks to fit their unique needs. Similar to a large enterprise with respect to its own custom network, when community anchors use an R&E network, the community anchor can dictate how the network is designed and operates. In fact, the users can also be a part of the technical advisory committee for the network.

An approach that allows for the development of best practices while at the same time tailoring those best practices to the unique needs of a local community is, in my opinion, one of the best ways to combat barriers to deployment and ensure adoption.

The high capacity framework of R&E networks, allows them to operate in an uncongested manner, with plenty of headroom for applications with heavy bandwidth demands. This gives researchers the freedom to create innovative applications for video conferencing, certain telemedicine applications, and distance learning. By contrast, several commercial networks operate for financial reasons, at or near capacity. This limits the ability of advanced applications to get through the network unimpeded.

Since the Internet2 community develops these R&E networks through shared governance, it leads to greater transparency than that offered by many commercial providers. If something goes wrong, the users of Internet2's networks will know why. With many commercial carriers, this is less likely because their networks are proprietary and operational information doesn't flow as freely among providers.

Internet2 does not simply promote accessibility of broadband services by doing everything it can to connect anchor institutions to these ultrafast R&E networks. It also plays a very important role in developing new Internet technologies with regard to Identity Management middleware, security, network research, and performance measurement capabilities. Most consumers may not know how important these behind-the-scenes developments are. But these new technologies are not just important to updating the R&E networks that the Internet2 and anchor institutions use. They are also critical to the progress of the Internet at large.

Last, but certainly not least, the Internet2 approach promotes the development of an Open Internet. On this policy initiative, Internet2 is a vital partner for those, who like me, strongly advocate for an Open Internet. You are a valuable asset in this policy debate because, for almost 15 years, your non-profit organization has endeavored to find the best way to deploy advanced broadband networks to millions of users. Your engineers began with the assumption that they should prioritize certain kinds of bits, such as streaming video, in order to assure that they arrive without delay. They experimented with various "quality of service" schemes. Their practical experience showed that, once a service provider made the initial investment to deploy fiber and

adequately provisioned their networks, it was often more cost effective to simply provide more bandwidth to end users, than to employ complex engineering schemes that would give preferential treatment to certain packets of information.

Internet2 also understands that not discriminating among packets gives the end user the power to use protocols to innovate at the edge. This was vital to the development of some of the most important innovations on the Internet. The World Wide Web, the Web browser, the search engine, and instant messaging, were all developed by end users of the network. If we want an Internet experience that promotes more of these innovative technologies, and allows as many people as possible to enjoy these technologies, then we need Internet2's help to keep the Internet open.

For these reasons, I view Internet2 as an essential organization to broadband efforts that consistently further the goals set forth in the National Broadband Plan. But, while these substantial efforts from Internet2 have helped our country make significant strides in the deployment of broadband networks to thousands of communities, as most of you know, there is still more to do.

Last year, the National Broadband Plan estimated that 14 to 24 million Americans still live in areas with no broadband infrastructure. Another key finding is that affordability is the most important reason why Americans do not subscribe to broadband service at home. Those who find it unaffordable to have broadband at home, depend quite heavily on access to broadband service at libraries, schools, and other community anchor institutions. Without fully understanding our broadband needs, and building out sophisticated networks into the general community, we run the risk of leaving our most underserved citizens out in the cold.

Internet2 understands there is still a vital role for it to play here. In fact, it applied for, and was awarded a \$62 million plus grant from NTIA's BTOP program to develop a comprehensive 50-state network benefitting approximately 121,000 community anchors. This is a large-scale, public-private partnership, with a dedicated fiber backbone that can deliver speeds up to 200 Giga bits per second. This project can improve health care options by linking facilities nationwide with greater capacity.

It can unify the Indian Health Care Networks, link Veterans Affairs Centers, and connect projects funded by the Federal Communications Commission's Rural Health Care Pilot Program. This network can also advance public safety by linking 6,183 Public Safety Answering Points and facilitating the development of a Next Generation 9-1-1 system.

While we need the efforts of you all, the Commission is committed to instituting improvements in infrastructure and development to decrease cost barriers. We have made considerable progress on the E-rate program, which has brought about significant success for community institutions, granting broadband access to 97% of schools nationwide and basic internet access to most of our public libraries. The Commission's 2010 E-rate decision, enabled schools and libraries to better serve students, teachers, librarians, and their communities, by providing more flexibility to select and make available the most cost-effective broadband and other communications services. Specifically, the schools can now lease fiber, whether lit or dark, from any entity, including research and education networks.

Pending before the Commission, are a number of other proceedings that impact the development of R and E networks. For instance, in the Connect America Fund or CAF proceeding, the Commission is considering whether efforts to connect anchor institutions should

be supported by the CAF, E-rate, or rural health care programs. That proceeding is also considering whether recipients of CAF should be required to engage in facilities-sharing arrangements with other providers. Internet2's input in this, and other proceedings, will ensure that our Nation is able to take advantage of all the benefits that R and E networks can offer.

I was excited to see Internet2 file comments in the proceedings the FCC opened late last year, to transition our legacy 9-1-1 networks to Next Generation 9-1-1 networks. One of the primary challenges to this transition is funding. As Internet2's comments explain, the Commission should explore every opportunity to leverage these R and E networks and help the public safety community meet the challenges they face in transitioning to NG9-1-1.

The bold initiatives that the FCC set forth in the National Broadband Plan will require significant collaborative efforts from our agency and from each and every one of Internet2's members and partners to have the impact we want for our Nation. I am committed to working as diligently as I can, along with you, to ensure that these services can become a reality. I firmly believe that through this partnership, we can push the limits of network capabilities, and connect those who need it the most.

I would like to once again thank Internet2 for inviting me to speak, and all of you for sharing in my hopes for the future. The FCC will truly depend upon each of your institutions, to improve broadband capabilities, and to assist in closing the digital divide. I must emphasize that your talent, resources and insight will be invaluable to this effort. Together we can accomplish the goal of granting all citizens across the country access to the most advanced broadband services we have to offer.

Thank you.