

As Prepared for Delivery

“Make America Great—with Great Broadband”

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Thank you.

We come together at the time of the final at bats in what feels like both the longest and most painful presidential election in our collective memory.

I'm not here to make a partisan statement. But I'll start by agreeing with 75% of an assertion of one of the candidates: that it is time—because it's always time--to Make America Great.

Indeed, I'd like to suggest the real topic of today's conference is how we make America great with great broadband.

Let's step back to consider the source of America's greatness. While it might seem odd to start a talk on next generation broadband by going back a four centuries, I don't, but then as an American Studies major, I have a bias for such things.

The bedrock of American greatness can be found in John Winthrop's sermon, “A Model of Christian Charity,” that he gave in 1630 to his fellow Puritans as they sailed from England to their new home in the Massachusetts colony. Winthrop, playing off of Matthew's version of the Sermon on the Mount, admonished his compatriots to create a “shining city on the hill”, one bonded together in love, compassion and hard work, for “the eyes of all people are before us” and—consciously echoing arguments in Exodus of Moses rallying the Israelites wandering the desert--failure would mean of failure of God's mission for humanity on earth.

Consider how different that mission statement was from the Spanish mission in the New World. It was not about extracting gold.

It was about creating a model to inspire, and as President Reagan described it in his farewell address, to build a city “teeming with people of all kinds living in harmony and peace; a city with free ports that hummed with commerce and creativity. And if there had to be city walls, the walls had doors and the doors were open to anyone with the will and the heart to get here.”

A few centuries later, one can see the impact of Winthrop's entreaties in how the French writer Alexis de Tocqueville chronicled American culture. He described us—and not just those of us who descended from those early New England towns--as

building on the 'seed' of Puritan thought, and developing the "habits of mind" that characterized American democracy, including township democracy and a pragmatic ability of Americans to organize themselves in voluntary ways to cooperatively improve their lives.

He compared the American vitality favorability with, ironically, Europeans who whose inhabitants thought of themselves "as colonists, indifferent to the fate of the place they live in....unconcerned with the fortunes of their village, the safety of their streets, the fate of their church and its vestry. They think that such things have nothing to do with them, that they belong to a powerful stranger called "the government." They enjoy these goods as tenants, without a sense of ownership, and never give a thought to how they might be improved."

As Tocqueville noted, Americans faced many challenges but our sense of ownership and ambition to make things better gave us a better ability than Europe to mold our future.

So it has been as Americans faced many challenges: a Civil War, industrialization, world wars, hot and cold, an information economy, and soon, an economy built on Artificial Intelligence.

And so it is how you, here in Wilson, have addressed the challenge you faced: how to make sure you have the table stakes for economic growth and social progress in the 21st Century Global Information Economy: a fiber based communications network providing abundant and affordable bandwidth.

You are building that shining city on the hill that inspired our earliest days and has inspired communities in our country and communities around the world.

And you did so with the values that have served this country well throughout our existence, with a local solution developed with local support.

It is not surprising that a nation built by immigrants honors risk and change. Our ancestors may have been scared of leaving but were more scared by staying where they were, of accepting the status quo.

That is what you all did by not accepting the status quo with the broadband you had.

And so you took it upon yourself to improve your situation.

Like the voyage of the Mayflower, it is likely to be regarded as a wise move. While our country is still in the early innings of next generation broadband, we have already seen great signs of progress.

In the last 3 years, North America has experienced record growth in fiber, now reaching about 30 million homes, with expected 2016 year over year growth of 16% tying the previous record.

The accelerated growth rate is not surprising given the value people place on quality broadband. A recent study showed that more than 90% of respondents said quality broadband was “very important” in choosing a community in which to live — second only to “safe streets.”

They are right to do so. Because while most people don’t know the underlying data, that data confirms the importance of great broadband for thriving as a place to work and live. The data indicates that improved broadband leads to improved metrics on a number of fronts, including:

- *Economic growth and better jobs.* A 2014 study showed that communities with widely available gigabit access enjoy per capita GDP that is 1.1 percent higher than communities with little to no availability of gigabit services. In dollar terms, the 14 gigabit broadband communities studied enjoyed approximately \$1.4 billion in additional GDP. Conversely, the 41 communities in the study that didn’t have widely available gigabit broadband likely experienced forgone GDP of as much as \$3.3 billion. A more recent study concluded that it is particularly important for the fast growing segment of home businesses, where fiber averages about \$73,000 in revenues, significantly higher than the second place cable with \$43,000. And there is all kinds of anecdotal evidence that the early gigabit adopters, like Chattanooga and Kansas City are enjoying all kinds of growth in entrepreneurial activity and jobs associated with their networks.
- *Increased property values.* A recent study showed that very high speed broadband has been shown to add nearly \$10,000 in value to a \$300,000 single-family residence. It is the number one amenity sought by MDU homeowners and the number two amenity sought in single-family homes.
- *Lower prices for broadband services.* A recent study found that in areas where gigabit service is introduced, the cost of slower tiers drops significantly. When gigabit is available, tiers of 100 Mbps or faster drop in price by as much \$27, while pricing for the lower-priced 25 Mbps service decreased between \$13 and \$18 monthly.

But this is just the beginning.

In the years to come we can expect that Wilson can be the community that brings the gigabit revolution to other rural communities. Following my talk, we will hear from others who will talk about how the impact of high-speed networks and related

new technology, such as drones and the Internet of things will affect agribusiness, as well as a panel on industrial innovation.

These are the kinds of discussions our country should want to have in many places but the truth is, it takes a network to bring such discussions to the fore.

The challenge for you is to take advantage of your lead and expand that advantage by expanding the broader ecosystem.

How do you do that?

There are many paths up the mountain. I suspect many in this room have better ideas than I would when it comes to how Wilson should proceed. But let me offer a couple of thoughts based on my experiences with other communities.

First, get everyone on. Adoption is a vexing problem, combining elements of affordability, literacy and relevance. But it is also viral; the more members of a community who are on, the greater the incentives for others to get on. And once universality is achieved, it opens the door to all kinds of community improvements not available to those communities half on and half off. The FCC's reform of its Lifeline program and many successful community adoption programs create new opportunities and models for achieving this goal.

Second, use the platform to better deliver public goods and services. All large enterprises are moving off the old analog platform and moving strictly to the digital platform. If you want to sell them something, if you want a job, if you want information from them, you have to be on line. They don't do this because they are nerds. They do this because it improves their ability to constantly improve how they deliver goods and services.

Government, because it has to serve everyone, cannot migrate as easily, another reason it is important to get everyone on. But government should also aspire to constantly improve how it delivers goods and services. That means ending the era of lines and paper and making all government services web based, providing greater transparency, always on, and above all, using more reliable data to improve performance.

Third, help every enterprise to become a networked empowered enterprise. Amazingly many small businesses are still not online. This not only undercuts their ability to sell, it makes it more difficult to improve efficiency in buying, operating and accounting made possible by cloud based services. Not every company needs to be a web-based company. But every company can benefit from the services now available on the web.

Fourth, be a laboratory for all the communities that resemble Wilson more than they resemble Silicon Valley. In Silicon Valley, VC's advise start-ups to "build things

people need.” But what we have seen in the last few years is a focus on building things that people who live in Silicon Valley need. As will be discussed in the next several panels, you bring to the table an understanding of needs that Silicon Valley will have trouble understanding. Make that work to your advantage.

Fifth, partner with the incredible resources of the Research Triangle Park area. You are lucky. You are the only community fiber network I know of so close to a large-scale fiber build where soon residents will have the most competitive gigabit market in the country. Moreover, you have access to the incredible resources of three world-class universities and a world-class tech hub.

And sixth, make sure your network accommodates the next technology shifts. The next two great networks to be built are the 5G next generation mobile network and the civic Internet of Things, bringing intelligence to the infrastructure underlying our communities, improving water, sewer, electricity and transportation grids. Both these new platforms will share a need for, and operate over, the fiber network you already have. Now is the time to start adopting the network to those emerging needs.

You are not alone in having future proof networks in your community.

But you are ahead. And the recent news from Google—that it is pausing its fiber efforts in all but a few communities and will look to provide abundant, affordable bandwidth through a fiber wireless combination—will keep you ahead longer.

That is a mixed blessing for you. One on hand, you will continue to have a competitive advantage over otherwise similarly situated communities.

On the other, the more others enjoy those gigabit speeds, the sooner the market will develop applications to take advantage of those speeds.

In light of the fact that Google will continue to build out in the Research Triangle and Charlotte areas, you all have the potential to become the largest and most diverse area with next generation internet.

Other North Carolina communities may wish to do the same.

But they may find it difficult. Unfortunately the values of community self-help are not always well represented in the halls of power.

I speak, of course, of the unfortunate law, H.129, that prohibits others in North Carolina from doing as you have done, and prohibits you from helping others by expanding.

To me, it is simple. The primary objective of broadband policy ought to be to stimulate faster, better, cheaper broadband. There is no evidence that that law does

so. There is evidence that that law makes broadband in North Carolina slower, worse and more expensive.

Exhibit A is the fact that as a result of a court decision upholding that law, you have had to stop offering Pinetops faster, better, cheaper broadband and it is only by your generosity that the service was not cut off.

So when the newly elected General Assembly returns to Raleigh, I hope your community, Pinetops and many others speak with a unified voice and tell the Assembly: Tear down the law that prohibits you from providing faster, better, cheaper broadband.

And if they need further information, show them a recent report that offers some critical insights into North Carolina's broadband situation.

It finds, among other things:

- North Carolina's private providers are building their fiber-optic networks in a couple metro areas but none in rural regions.
- Only 12 percent of North Carolina's rural population has a choice in broadband access. The rest have no option or only one option.
- All of North Carolina's telephone cooperatives are investing in fiber for members in their service territory.
- While North Carolina has 26 electric cooperatives capable of bringing fiber-to-the-home to rural residents, a 1999 state law limits the co-ops' access to capital for telecommunications projects.

Surely the General Assembly should have better things to do than stifling those who want to bring world-class broadband to underserved communities.

I do not want to suggest that having a gigabit network will solve all our problems. Addressing other challenges —from climate change to quality of education to the ability to attract an educated and diverse workforce—must be part of the mix.

But at some point in the near future the kind of network you have today, one that thousands of communities wish they had, will be the new table stakes for addressing both the challenges and opportunities of this century to build a better life for ourselves, our children, and the generations to follow.

And when those generations arrive, I hope that America is still great. I hope its residents and the world will see it as a shining city on the hill that we have aspired to be since our earliest days, that Reagan so eloquently described. Predictions about the future, as Yogi Berra usefully reminded us, are always tricky. But this prediction is safe: America will not be great if it does not have great broadband.

Many thanks.