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COMMENTS TO NTIA and RUS
Mahaska Communication Group, LLC

Section 6001 of the American Recovery and Reinvestment Act of 2009
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NTIA and RUS Joint Request for Information

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Broadband Technology Opportunities Program Comments

The Recovery and Reinvestment Act for Broadband provides a unique opportunity to build sustainable rural communication infrastructure that can have a transformative economic effect on rural US communities by providing broadband "glass highways" of connectivity in the way traditional concrete highways provide connectivity for economic sustainability.

We encourage the use of these funds be targeted for projects that are capable of building a replicable model for economic growth in rural areas. Rather than continue our reliance upon legacy systems that we would compare to the millions of miles of gravel roads in the U.S. built in the early 1900's, we propose that Fiber to the Premise (FTTP) networks be developed that provide us with tomorrow's roads of commerce that will be the "glass highways" of economic sustainability for the next century.

Just as roads should be planned for the traffic they will need to support, broadband infrastructure should be measured not by its speed today, but by its ability to:

a) be ubiquitous,
b) provide reliable connectivity,
c) expand capacity over time in a rapidly changing economy, and
d) be offered affordably.

The issue of 'speed' is relative to the size of the 'vehicles' being built to run on the roads. Investing in any system that has limitations on its ability to grow with demand will result in underserved, unsustainable businesses, schools and healthcare systems. Investing in "glass highways" will provide economic value far in excess of the cost of such systems.

Studying quality of life conditions show that poverty and low education attainment are concentrated in rural areas. To make this one-time influx of funds move rural America into the 21st century, funded projects must have:

1. Economic Feasibility

Building communication infrastructure in rural areas has always presented challenges, specifically the added "last mile" cost of connecting consumers. This "last mile" can be more than double the cost when compared to urban areas. For companies building and maintaining an FTTP network in this environment, help is needed for them to be sustainable.

We feel that spending the available public funds on FTTP networks in rural areas is an investment in our future through job creation and retention, gained efficiencies, and reduced expenses.

Rural population has shown a steady decline in the US since 1910 from 65.9 million to 55.4 million in 2000. In 1910, rural populations represented 72% of total US population. That number was down to 20% in 2000. We believe connecting these rural areas can reverse this trend and bring economic stability. In Iowa for instance, we estimate that every job saved or created represents $4000 in annual tax revenue (1000 jobs = $4 million).

We also believe an FTTP system will directly impact businesses by making them more efficient and competitive in the world market while reducing their expenses for communication services. In Iowa, Mahaska County's farming industry is roughly a $200 million dollar business annually. Providing digital tools for agriculture can easily increase the productivity by more than 5%, which would net $10 million in economic value each year. Other businesses in Mahaska County would save upwards of $1 million a year in reduced communication expenses. Oskaloosa businesses, which represent about half of the population of Mahaska County, are saving $600,000 annually with the current FTTP deployment in that community.

These are some examples of the economic benefits that a FTTP network can directly impact. Investing in an FTTP solution allows for bandwidth that can grow to meet demand, help the area businesses keep pace with world-class competition, and spur job growth and retention.

2. Value

a) Education. The FTTP system can make possible worldwide distance learning, home access to school systems 24/7, virtual learning, virtual classrooms, communication internships and a learning intranet between all school districts within the county. Not only would this greatly improve learning opportunities at all levels, but also reduce costs through the sharing of resources. The existing FTTP in Mahaska County is an example of what can be achieved by providing an Intranet system among three school districts in the county.

b) Community. Using the fiber system, local live broadcasting of City Council meetings, County Supervisor meetings, School Board meetings and local news programs are all possible. Community sporting and cultural events can be

broadcast live on local channels in high definition. The system also can provide broadband access for low-income and senior residents through computer centers at public libraries, activity centers, and other town centers. Examples of this already exist within Oskaloosa and have significant positive community impact.

c) Health. Telemedicine, especially for diagnostic, monitoring and consultative services are a growing concern for rural residents, where the number of providers continues to decline. Fiber communication systems allow rural health centers to partner with hospitals and specialists to provide expanded services such as remote patient monitoring and remote diagnosis and analysis.

d) Energy. The Department of Energy lists Integrated IP communications as a fundamental technology that will drive the "smart grid" and reduce energy consumption by the consumer. If half the homes in the US used 10% less electricity, it would be equivalent to taking 8 million cars off the roads everyday. An FTTP network would meet that requirement by providing the network capacity and speed to connect every home passed for energy monitoring, metering, and control.

3. Provide a Working Solution

One such Iowa model exists today and has helped reduce business communication costs an average of 38 percent, or $3 million over a 5-year period. It has increased reliability, increased service capacity within the community and resulted in the direct creation of 40 jobs. It also serves to make the community more attractive to potential employees. That model, Mahaska Communication Group (MCG), was formed nearly 10 years ago to solve problems with reliable communication services after the incumbent carriers in the Mahaska County area were unable to provide adequate service that would allow Musco Lighting, a worldwide leader in providing permanent and temporary lighting systems, the opportunity to support the economic activity of the company for their U.S. and international business operations. Not only could the existing carrier not meet the needs at that time of an expanding business in rural Iowa, they had no long-term plans for providing critically needed broadband services. In short, all of Mahaska County was either underserved or unserved by communication infrastructure and economically unsustainable.

MCG research in 2000 - 2001 led to the conclusion that the best method of providing future-proof broadband service was through the use of a FTTP solution. MCG and Musco partnered with Iowa Network Services to achieve a cross connect, or midway Point-of-Presence (PoP), between two existing locations to provide critically needed basic broadband access to the Oskaloosa area. The commitment has also resulted in MCG being able to grow its customer base from zero to over 3400 customers within the first 6 years of operations.

In addition to the services mentioned above, MCG has supported the establishment of the Communication Research Institute (CRI) of William Penn University. CRI offers a unique curriculum and intensive, hands-on training for individuals interested in news broadcasting and video production. Video production classes and internships are offered to Oskaloosa High School and William Penn students. These students broadcast local games, concerts, church services, the lighted Christmas parade and other local events. MCG provides free Internet service to the Public

Library computer center serving 1270 adults and students monthly. MCG offers free monthly classes on the use of the Internet and donates service to the City of Oskaloosa, Public Library, Mahaska County, Oskaloosa School District, Oskaloosa Christian School, North Mahaska School District, Eddyville/Blakesburg School District and several area non-profit organizations.

We believe the MCG model demonstrates the capital and operating cost of providing a sustainable broadband infrastructure is achievable and essential to the viability of 70 percent of the U.S. population living in rural communities.

We encourage the NTIA and RUS to establish a scoring system to aid in the review of applications that can result in projects demonstrating the most benefit to the unserved and underserved. It should also require that areas be served in a way that will aid in meeting the economic development, educational, health, and general community needs for the future. Service providers must be able to show the solutions that they propose can provide:

1. A fiber system, defined by capacity – not speed, capable of allowing business partners to keep pace with their worldwide competition.
2. An economic value measure to support growth opportunities for existing and potential future business and jobs in their service areas.
3. Distance learning and virtual classroom models to support the needs of the educational system.
4. Opportunities for the health industry to provide telemedicine between patients and their doctors, as well as provide intranet accessibility between hospitals, clinics, doctor's offices, and care providers.
5. Better communication on community issues as well as providing broadband access for low-income and senior residents through computer centers within their service areas.
6. Training opportunities for residents and businesses.
7. Connectivity to the "smart grid" for increased efficiencies in energy usage.

Thank you, in advance, for your consideration. We would welcome the opportunity to provide additional information or input as appropriate.