



STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

STEM ADVISORY COUNCIL BROADBAND COMMITTEE

Co-Chair John Carver, Superintendent, Howard-Winneshiek Community School District
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Amy Kuhlers, Program Manager, Connect Iowa
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Dave Duncan, President, Iowa Telecommunication Association
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Galen Howsare, Chief Financial Officer, Iowa Association of School Boards
Karen Randall, Keystone Area Education Association
Michael Sadler, Assistant VP for Public Policy
Larry Siegel, Iowa School Finance and Information System Services
Jeff Weld, Executive Director, Governor's STEM Advisory Council
Josh Byrnes, State Representative, District 14
Steven Soddors, State Senator, District 36

September 19, 2013

The STEM Advisory Council Broadband Committee is soliciting input from stakeholders all across Iowa who can offer insights into the unique broadband challenges facing the state, as well as provide thoughts on possible solutions. This input will help enhance efforts in developing effective policy recommendations to expand broadband access, adoption and use for all Iowans.

To offer comments, please address the questions below. All responses are considered public information, so please do not include confidential information in your response.

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- I. What barriers or other issues can you identify that may impede the increase of broadband access, adoption and use across the state?

The primary challenge is the bandwidth is insufficient at the local loop as well as the aggregation points to the backbone internet carriers. Broadband has been used in many communities to give the illusion of high-speed access when in reality the local loops and backbone links to the internet are not adequate, poorly architected, grossly oversubscribed and are easily saturated which degrades performance for everyone. This leads to poor performance during high usage periods. To resolve this there is a need to be able to support the unpredictable bandwidth demands.

(Think about a snow day, businesses, kids, moms, and dads all at home stuck inside watching Netflix, Xbox360, music, etc... and not just one per house but 10 different devices doing the same thing)

The State of Iowa has many different local exchange providers in rural communities. These local exchanges may not have the facilities that can support broadband nor do they have high-end facilities to service the aggregation points to the core internet backbone.



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The physical media used to connect residential and business properties to the services in some areas are long distances from the central offices and that creates a challenge trying to provide service to farms, acreages or townships where the actual distance becomes one of the primary technology challenges when using traditional services.

II. If you had to choose one *primary* barrier, what would that be?

I believe the primary barrier described above will determine the success. If the service does not perform well all the time, especially when businesses and consumers need it or more importantly "want" it to work the users' perception will be negative and ultimately will fail. Successfully addressing the first challenge creates a framework and architecture for success.

III. What recommendations do you have to overcome these barriers?

The State of Iowa is in a unique position to address this challenge. I will try to describe what I believe could be a valid consideration.

The ICN has an incredibly advanced fiber optic backbone that reaches nearly every rural community in Iowa and can provide virtually unlimited capacity. The ICN in partnership with the local exchanges, private businesses, and cable providers could provide virtually unlimited "aggregation and backbone" services to the communities, residents, and businesses across the state of Iowa. The ICN could be a state tier 1 provider into the national internet backbone providers like Century Link, AT&T, Verizon, Sprint etc...

The ICN would ensure the bandwidth is available when needed based on community needs like density, educational programs, agricultural, or other needs. This approach also allows the state to take advantage of alternative technologies again working in partnership with local exchanges, private businesses, cable providers and local communities to use microwave, radio, or Wi-Fi for local loop services while leveraging the reliability and stability of the ICN as the a backbone. A strict architecture would provide foundational strength for any local service offering whether DSL, Broadband, Microwave, Radio, or WIFI, the fundamentals of the architecture would be very similar.

IV. What are your expectations for future access needs?





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As a business and consumer of many different types of telecommunication services, the expectation is the services are available, capacity increases are quickly provisioned, implementation times are reasonable, the economics of the services are competitive and maintenance and repair are done in a timely fashion with high quality. The telecommunications infrastructure is the backbone of all things mobile, digital and on demand services, which consumers of all ages are embracing. Everything is using data and telecommunication services and having a robust high capacity core backbone is the foundation for improving existing technologies and enabling and adopting new emerging technologies when appropriate.

V. Other comments?

None.