Clear Creek and Gilpin Counties Broadband Planning, Community Engagement Meetings

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Community engagement is a critical component of the broadband planning process in Clear Creek and Gilpin Counties. During the first half of December 2016, the community was invited to participate in an open dialogue at locations throughout the counties. Attendees engaged in focused discussions regarding their current needs and challenges, as well as the broadband environment in general. Additionally, attendees were asked to complete one of two surveys, one for residential users and the other for commercial applications, hosted on the County and City websites. Discussions were facilitated by county commissioners, city and county staff and consultants with the firm NEO Connect.

Focus Groups

The focus groups ranged in size from one to twenty-two, and were engaged in discussions that focused on the following concerns:

- Public Safety
- Education
- Business & Economic Development
- Government
- Residential Services

Discussion Topics

Discussions were well attended in all instances and included engaged and productive exchanges between the various stakeholder groups. Topics included:

- Current broadband infrastructure: availability, capability, and capacity
- Business needs, challenges, opportunities and applications
- Public/Private Partnerships and other development options
- Funding mechanisms available for government entities
- Future growth and scalability
- Economic diversification and development

Group Discussions
Public Safety

Focus groups for Public Safety included representatives from City and County law enforcement, the Fire District and Emergency services and discussions focused primarily on the issues of availability and redundancy. Gilpin County Sheriff, Bruce Hartman explained that although his department is satisfied with their current broadband capacity, they are genuinely concerned about reliability. His department and all local government offices recently experienced an internet service outage. This was the result of a single cut to a Century Link fiber cable – the sole connection for local government. The outage included county-wide 911 services, and created a difficult and dangerous situation for Public Safety Personnel, including law enforcement, ambulance, and fire and rescue, who all rely on local access for mission critical communications. This event highlighted the concerns around system-wide failures and underscored the lack of redundant services available, even for emergency services.

Brandon Daruna, Chief Paramedic/Manager with Gilpin Ambulance Authority expressed his concerns around this need for redundant communication and internet services for Ambulance and Fire Protection activities. Daruna, having firsthand experience working EMS in New Orleans during Hurricane Katrina, is concerned about the vulnerability of their current cellular system in a disaster situation. This concern was echoed by the Gary Allen, Chief of the Central City Fire Protection District, who also identified a significant lack of both cellular connection capability, and bandwidth availability in many emergency situations. Emergency personnel are expecting additional, near-term increases in bandwidth consumption due to emerging communication and reporting technologies.

Although Black Hawk Police and the Gilpin County Sheriff's Department believe that landline internet service is sufficient now, current pricing and long-term bandwidth needs are key issues for both Departments. Black Hawk Chief of Police, Steve Cole discussed his Department's planned adoption of body cameras in 2017, and the potential challenges around future bandwidth and storage needs of this technology.

Representatives from the Clear Creek County Sheriff and IT Departments discussed the County's current tower inventory, and scalability limitations. The incredibly rugged topography of both Clear Creek and Gilpin County make new radio tower installation

incredibly cost prohibitive. Full utilization of tower facilities is therefore essential in maximizing services. Clear Creek County Radio Tech, John Kyler described expansion bottlenecks at one of the County's primary sites, which is at maximum attachment capacity, yet only served by T1 circuits. NEO Connect is conducting a tower inventory in both counties which will include coverage areas, equipment capacities, load analysis, and scalability assessments. This evaluation will build on previous public communications infrastructure assessments, including those performed by Pericle and Motorola.

Clear Creek County Sheriff, Rick Albers, explained that inadequate cellular and wireless coverage is a critical concern for local law-enforcement personnel. Not only do officers rely on cell phones for many purposes, they count on both cellular and wireless connections for their Mobile Data Terminals (MDT). These are the in-car, laptop and radio communication terminals that officers depend on for mission-critical-communications with dispatch, and other law enforcement and public safety agencies.

Education

Dialogue about the current state of broadband in education included discussions with Gilpin County Superintendent of Schools Dr. Dave MacKenzie, President of Clear Creek County, Board of Education, Mitch Houston, and Technology Director for Clear Creek School District, Galen Thompson. As for Gilpin County, there is one K-12 school which is served by a 100 Mbps, USA Communications fiber connection. Dr. MacKenzie feels that the school's broadband services are adequate and fairly priced. The school does however, struggle with wireless-bandwidth, overload, issues and continues to pursue solutions. Poor quality, cellular service at the school has been identified as a larger problem, in the context of emergency management for first responders.

Although Mitch Houston described connectivity at his schools as "Okay", he noted that the larger issue is that many students have inadequate connectivity at home. This forces students to travel to the library to finish homework after school, and it is not uncommon to see them sitting in the parking lot after dark completing assignments. And for many students, the Library is their primary, after-school internet provider. The school has offered to provide after-hours access to school wi-fi, but implementation requires community-wide collaboration. Galen Thompson and Clear Creek County IT Director, John Bottomley discussed utilizing the 100Mbps Century Link circuit at King Murphy elementary as a broadband, connection point to reach into nearby residential areas. The school district is exploring this option now.

The schools are currently using E-Rate Grant Funding to pay for both, services and infrastructure, but still need to address bottlenecks in their Wide Area Network. And Thompson says that although the school is satisfied with their current Century Link service, they are concerned about redundancy. He added another concern is the increase in use of electronic textbooks, which will continue to stretch broadband resources throughout the school district.

Business and Economic Development

The local business community in Gilpin County was represented by IT Directors and Managers from area casinos, including the Ameristar, Canyon, and Saratoga. Redundancy and cost were common themes. The IT Director for one of the casinos is frustrated by the lack of competition among service providers, preventing them from having true redundancy when the last mile provider is the same for primary and secondary circuits. Additionally, several managers worried that CenturyLink is running out of capacity, since they are unable to add additional DSL lines.

The IT Manager, at another casino says his biggest concern is redundancy, since many critical activities are managed through Virtual Private Networks that connect them to out-of-state headquarters. Many of the casinos rely on Century Link to provide this physical path and the concern for outages is real, as evidenced in recent service interruptions. Most of the IT Professionals agreed that more competition among providers would create more physical paths to their various properties.

Clear Creek County was represented in discussions by several County Commissioners, the County Emergency Coordinator, Georgetown City Administrator, and Silver Plume Fire District. Georgetown City Administrator, Tom Hale discussed how the City could participate in promoting broadband, stating that he feels it is fundamental to the long-term viability of the community. Clear Creek County Commissioner-Elect, Randy Wheelock and current Commissioner, Phil Buckland identified the role of highspeed broadband in economic development, and that the lack of adequate broadband is a detriment to recruiting new business. Further, many real estate professionals are concerned that property will not sell without the broadband needed to conduct business from home.

A significant concern for Clear Creek County is the impact of the closing of the Henderson Mine in the next 3 – 5 years. The mine currently accounts for 70% of the

county's tax income, revenue that local leaders are looking hard for ways to replace. Tom Hale, Georgetown City Administrator is encouraging city leadership to put SB-152 on the April ballot. A successful opt-out of the state law would mean that the City would be able to invest in the broadband infrastructure that has been identified as crucial in future economic development. Projects under consideration, and that would be affected by this, include retail and residential developments throughout the I-70 corridor. All of which will require access to abundant, reliable and affordable broadband services.

Another large employer in Clear Creek County is also in danger of closing. The Tall Grass Spa near Evergreen employs over 70 people, and relies on cloud-based software for vital business functions. Lack of access to adequate broadband is negatively impacting this firms ability to survive in a highly competitive industry. Repeated efforts by the business's owner to gain adequate broadband services from existing providers have not been successful.

Government

Meetings for Gilpin County Government included discussions with the County Manager, Black Hawk City Manager, Central City Town Manager, and representatives from both City's IT contractors. Clear Creek communities were represented by a variety of Clear Creek County and City Managers and Staff including Community Development, Transportation, and Environmental Health. Also in attendance throughout all conversations were many County Commissioners and County Commissioners-Elect. And Clear Creek County IT Director, John Bottomley and County Director of Communications, John Bryan participated in all stakeholder conversations.

Clear Creek County Community Development Director, Fred Rollenhagen stated that the county annex does not have any broadband service issues. Generally, his concern is lack of coverage throughout the county. He noted that development in Clear Creek County is single-home, dispersed development, not urban development. The last subdivision was approved in 2000 and many of the dispersed home sites don't have access to service.

Rollenhagen feels that people choose to build in areas with broadband, but questioned the value of government investment in infrastructure. Further evaluation is necessary to determine long-term feasibility, and to establish "Where do we get the biggest bang for our buck?" IT Director, John Bottomley responded that he wants to identify where broadband development is economically feasible. For example, pockets in Idaho Springs

with sub 5 Mbps and aging infrastructure are prime candidates. Bottomley continues, "The demand is there, but we need to look at the supply side to make it more economically feasible to service providers. However, even in 25 years, we're not going to get it to everyone. We need to identify where's it's feasible, the major barrier is capital cost."

JoAnn Sorenson with the Transportation Department stated that the new local bus route moves in and out of cell service. This creates potential issues for communicating with emergency services. She feels like the local governments are in a good position to negotiate with CDOT, given property ownership and right-of-way issues. She voiced another common concern with the RoadX project; will vehicle to vehicle, and vehicle to infrastructure communication contribute to capacity issues? And will cell capacity be diminished by I-70 traffic? Sorenson notes that cellular capacity and quality are already affected by high-volume, weekend traffic. She concludes that there has not been enough conversation with CDOT to get the necessary answers.

Environmental/Public Health's, Charlotte Hampson explained that high-level, wastewater, treatment systems are installed in 300 homes in the county, mostly in Eastern Clear Creek County. The county has the 4th largest number of high level treatment systems in the country. These systems are required by law for homes within 200 horizontal feet of groundwater. More are being installed with new construction and most require some type of wireless communication for monitoring and maintenance. Most of the areas where new construction is happening do not have access to the necessary broadband services.

Library Director, Sue Lathrop confirmed that the Library's issue is capacity. The District's two Libraries serve those residents who would otherwise not have access. The library has multiple accounts with Comcast at both locations. Lathrop says that, "Increased use starting around 3:30pm slows service to a crawl." They offer free wi-fi services, which are password protected and there is one open connection at each location, which residents can use after hours. There are technical issues though and the library cannot afford the necessary tech support to resolve these problems. Lathrop asked whether or not there is assistance available to help them access E-Rate Grant Funding, since they do not have the skills or resources to leverage. She noted also that an unfortunate side effect of a bad economy is that Library usage goes up while funding goes down. Currently, they

are 'technically' meeting the needs of their customers, but long term viability is in question.

Residential Broadband

Residential services were discussed at length during the General Public Meetings. These final meetings were organized as an open forum for the general public and were attended by nearly 60 citizens. NEO Connect and IT Director John Bottomley provided an overview of The County's broadband planning efforts, discussed core planning activities, and offered possible timelines for the finalizing of decisions and possible implementation. Additionally, County Officials invited public input and participation in the Broadband Surveys.

Citizens of Clear Creek and Gilpin County shared a common complaint with concerns about affordability, redundancy and accessibility. A broad variety of services are available, with some customers still on dial-up service for $9.95 per month, and other customers with 150 Mbps, high-speed service for $100 per month. Many users subscribe to satellite based services, which were typically described as having low data caps, high latency and low reliability.

An Echo Hills resident who works from home as a software developer, could not get landline-based services with higher than .3 Mbps of service. He currently uses satellite-based service, but feels that it is inadequate for his work-from-home needs. Several people discussed the need for multiple services at their homes to guarantee accessibility and reliability. The counties will continue to review service quality and residential pricing concerns through the ongoing surveys.

One longtime resident noted that the last copper upgrade was in the 1990s, when the telecom provider upgraded party lines to private lines. Many residents identify that current service providers are not responsive to their needs, and offer undependable customer service. Lack of competition exacerbates the situation. Residents are convinced that their property values are stagnant and that countless real estate deals fall through because of lack of broadband.

Some residents volunteered that they are even considering leaving the area due solely to inadequate broadband services. And one resident with 1.5 Mbps residential service asked about economic development in the county, "How can we create jobs that work from home with such poor broadband?"

Several residents were resistant to the idea of government investment in fiber optic infrastructure, and cited the emergence of lower cost alternatives. John Bottomley assured them that fiber is not a short-term investment, but an infrastructure asset with a 50-year shelf-life, emphasizing that endpoints can be upgraded without replacing the fiber itself.

When a Clear Creek County resident asked how citizens could keep the broadband momentum going, the discussion turned to creating an LTPT group – Local Technology Planning Team to drive awareness and activity around broadband development. Regular citizen follow up with County Commissioners and Staff was also encouraged by John Bottomley.

Another resident asked, "Where is the sense of urgency going to come from to generate more revenue and property values and vibrant businesses. How can Clear Creek County attract more business? " IT Director John Bottomley replied that, "The sense of urgency is here, now. With the closure of the Henderson mine, Clear Creek County is faced with the end of an era. The County is actively working to identify what the economic future looks like, and is acutely aware that Broadband is key to every economic strategy."