



**Written Testimony on H.117  
presented to  
House Committee on Commerce and Economic Development,  
Rep. William Botzow, Chair  
by  
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# Burlington Telecom

## Overview

- An opportunity exists at Burlington Telecom to develop future community economic stabilization and growth from an underutilized fiber (optic) to the home network, whose capability is unique in Burlington, and greater than most in the nation.
- The network is capable of delivering symmetrical bandwidth speeds of 1 Gigabit per second (Gbps) and more to premises across more than 80% of the City, beyond the current market capability offered by traditional delivery infrastructures, and on par with the most powerful city-wide networks anywhere in the US.
- Fiber Optics increasingly are viewed in many parts of the world as this century's essential infrastructure in the same way as electricity or water has been viewed in the past.
- In the next two to three decades, technological change will transform almost every aspect of our lives in ways that we can barely imagine today, and in the view of many, more fundamentally than anything since the Industrial Revolution. It will change how people, business, government, and other organizations live, work, and engage with each other.
- In the US, communities much larger than Burlington, such as Chattanooga, TN and Lafayette, LA, already have invested hundreds of millions of dollars to build networks with similar capabilities to Burlington's.
- Google also has begun to invest in building out city-wide fiber networks. The first straddled Kansas City, KS and Kansas City, MO. Google has announced further plans to build out such networks in 38 more US cities.
- Currently, hundreds of such networks have been or are being built or are in the planning phases in the US.
- The President also has recently spent time talking about the importance of such networks for future economic development, traveling to Cedar Falls, IA in late January 2015 to highlight the positive impact that city's network has had on its local economy, and to encourage others to follow that example.
- BT's network provides significant infrastructure capability to facilitate future ongoing economic development and to attract tech start-ups and entrepreneurs to Burlington and surrounding communities, thus providing the opportunity to create skilled high-paying technology-centric roles for many years to come.
- BT's core infrastructure has a hub capable of serving many more customers.

## Background

- Created in the early 2000s as one of the nation's first municipal fiber builds, BT is located in Burlington, Vermont's largest city, with over 42,000 citizens. BT passes over 15,600 properties, as well as connects all of the City's municipal offices, schools, and essential services.
- In recent years, the opportunity that BT offers has been compromised by the impact of problems related to the financing of its network build-out and resulting dispute with Citibank, which finally was resolved on January 2, 2015, after being approved by the Public Service Board and the Burlington City Council.

- BT currently has over 4,600 residential customers, representing over 29% of its available residential market, as well as over 400 business customers, ranging from local anchor institutions to small nonprofits and “mom and pops” to municipal offices and schools.
- In spite of the problems clouding its recent years of operation, subscriber levels, which fell to a low of approximately 3,950 in January 2012, have recovered, growing by more than 25%, and now stand at an all-time high of more than 5,000.
- Gigabit capability has been deployed throughout the Burlington School District, Law Enforcement, Generator Makers Space, and the Fletcher Free Library.
- For qualifying low income Burlington households with children in the Burlington School District, BT offers “Edu-Net”, a 25Mbps symmetrical Internet access service, for \$9.99/month.

### **US Ignite/BTV Ignite**

- In October 2013, Burlington became the 14<sup>th</sup> member network of US Ignite, a nationally focused non-profit launched in June 2012, originating from the Office of Science and Technology Policy in the White House, with the support of the National Science Foundation (NSF).
- Ignite was created to drive the development of next generation high speed applications that will run on fiber networks, such as the Google fiber network in Kansas City and the local fiber networks in Chattanooga and Lafayette, all with similar capabilities to Burlington’s network.
- There currently are approximately 50 US Ignite communities, including Burlington, with a target to have 200 by 2018.
- BTV Ignite has broad-based local institutional and community involvement. The initiative is overseen by Burlington’s Mayor, and an Advisory Group that he chairs. The group also includes the active participation of Bill Wallace, the Executive Director of US Ignite, last in Burlington in early February 2015.
- The BTV Ignite initiative is focused on the emerging local and national tech economy through:
  - Creating a community and economic development plan, targeted for completion in late 2015.
  - Focusing on identifying the conditions necessary to enable ongoing, tech driven, sustainable economic growth.
  - Partnering with other US Ignite communities, such as Kansas City and Chattanooga, in specific areas of development that utilize the ultra-high-speed bandwidth capabilities of their fiber infrastructures
  - Leveraging this region’s core capabilities in Cyber Security as a Service, Edu-Gaming, Additive Manufacturing, Tele-Medicine, Complex Systems, Food Systems, and Neuroscience for the development of next generation applications capable of running on networks such as BT’s, and those of other Ignite communities.
  - Ensuring broader community involvement in leveraging Burlington’s Gigabit infrastructure to create a foundation for an economically and socially healthier community as a core element of the initiative. Burlington has an active Code for America Brigade whose members give their time and coding expertise at no

cost. They currently are “standing up” a “Local Civic Cloud”, hosted by BT, and believed to be the first in the US and the recipient of a Knight Prototype Fund Grant to facilitate its deployment.

- Additionally, in a multi-million dollar funding proposal currently under consideration by the NSF, US Ignite is proposing the installation of Geni Rack local cloud computing capabilities, and, as importantly, the infrastructure to link directly to the other participating communities, providing a common Gigabit connectivity infrastructure, between those fifteen communities, facilitating closer co-operation, interaction, and shared application development and testing opportunities.

### **Summary**

- An opportunity exists in Burlington, VT for the creation of long term economic and community value from an existing, underutilized fiber to the premise network, whose capability is unmatched in the City.
- Burlington’s network is very powerful and may spark the evolution of new and lucrative markets. Evidence of the emergence of those markets grows daily, offering the possibility of transformational change across many areas over time, and the creation of well-paid local jobs consistent with Vermont’s local economy.
- In a number of other US Ignite communities, including Chattanooga and Kansas City, Internet access pricing appears to be settling in the region of \$70/month for a one Gigabit residential symmetrical connection.
- Those communities also are harnessing the power of their local networks and focusing on making the changes necessary to position themselves for sustained economic growth, focused on the emerging and growing Tech economy.
- This emerging economy offers the prospect of creating clean, well paid local tech-centric jobs that keep Vermonters in Vermont.