

BRIDGING THE DIGITAL DIVIDE

Canada's Rural & Remote Broadband Conference

November 12-14, 2019

Prepared by: Councillor Jones-Scissons & Helen-Anne Bilodeau

EXECUTIVE SUMMARY

- The Rural and Remote Broadband conference had over 200 representatives from across Canada and northern United States join together in North Bay. The purpose was to discuss the vast discrepancies of broadband delivery and offer as much information as possible to assist rural and remote communities get the internet they deserve.
- We were introduced to avenues including “dark fibre” - a highway of fibre technology without “exits” - to rural communities that, with a solid plan, built their own towers and buried conduit on properties to provide a cheaper method to bringing broadband to as many as they could.
- This report has been written to provide a quick snapshot of the presentations, and provide a suggested avenue to achieve technology together, providing a better future in our children’s’ education, our communities’ prosperity, and keeping families together, remotely.

THE EVOLUTION OF BROADBAND TECHNOLOGIES, SPEEDS AND CHALLENGES IN RURAL AND REMOTE AREAS

ROB MCCANN - PRESIDENT, HAMILTON TECHNOLOGY CENTRE
FOUNDER, CLEARCABLE NETWORKS

- 2002-2015 there was a 50% increase in demand.
- Through Clearcable Networks speeds were increased to accommodate a 30% growth of apps such as Netflix. The most important application in 2019 remains Video Streaming.
- Through the ability to access Quadro Rural Fibre, along with building towers, Clearcable was able to solve the project's geographical issues.

Current Outlook:

- Period of slower growth may continue for some time
- 50 Download Speed ("DS") x 10 Upload Speed ("US") is likely more than sufficient for now
- Could offer more investment in remote areas
- Means current technology will likely be sufficient

Likely Architectures

- Wireless
- Fibre-to-the-Home ("FTTH")
- Hybrid Approaches with communities joining together to create a Rural Community Network.

Mr. McCann encourages communities to 'Start Building' together

ECONOMICS OF RURAL BROADBAND

JOHN JUNG- EXECUTIVE DIRECTOR OF IFC CANADA (TORONTO) CHAIRMAN & CO-FOUNDER INTELLIGENT COMMUNITY FORUM (NYC) 2015 URBAN PLANNING

Drivers of Divergent Network Outcomes:

- Strategic Choices of large infrastructure providers are driven by large corporate technology endowments and investor expectations
- National regulatory policy strategies that limit the scope for “sweating the copper” - increasing capacity of current Digital Subscriber Line (“DSL”) - is inefficient duplication

Current Outlook:

- 50DS/10US NOT achievable without Fibre
- Providers are not cooperating in helping to build for a better product.... there are better investment opportunities elsewhere and not always a cost related factor

General Options and Strategies:

- **Do Nothing:** Wait for technological innovation in wireless/LEO satellites (2023)
- **Targeted Subsidies:** Direct fixed (operational?) cost subsidies to private providers willing to serve high cost/low return rural from public budget (tax incentives)
- **Essential Facilities Obligations:** Wholesale access obligations on “dark fibre” transport capacity to minimize duplication / promote co-investment/cooperation in rural areas (common In Europe/Asia)
- **Universal Service Fund:** Fees on large providers dominating low cost/high revenue to subsidize rural areas (U.S. approach)

Recommendations :

- Apply for subsidies and loans for Fibre and Tower combination
- Bring fibre to towers for better km coverage better value

BROADBAND AN ESSENTIAL SERVICE

ALLAN THOMPSON - MAYOR OF CALEDON AND CHAIR OF RURAL ONTARIO MUNICIPAL ASSOCIATION

Recommendation:

Collaborating to Build a Stronger Rural & Remote Broadband Ecosystem

Connectivity is a Solution Not a Problem

Setting the Course to Connectivity -

- suggests a 1% levy to help with costs and maintenance to offset costs associated with owning parts of the fibre lines
- Municipalities are the key drivers to improve broadband access
- Apply to the private sector and at municipal level
- Apply for federal and provincial funding

COMMUNITY MODELS FOR ADDRESSING CONNECTIVITY CHALLENGES

LAURA BRADLEY - GENERAL MANAGER YORKNET

YorkNet lead was instrumental in bringing 100% fibre to 850 km in York Region (Markham, Vaughan, King City, Newmarket, East Gwillimbury)

- YorkNet started a program in 2018 with dark fibre
- Operates and maintains fibre in the region (leased in 2012)
- Accessed Federal Government Connect to Innovate program to provide infrastructure
- Locate “the spaces between the places” - we accomplish that by divide the hexagon into 4 parts with “GIS” software

Underserved Areas Challenges:

- Limited Capital
- Low Household Density
- Low Income Neighbourhoods
- Limited Revenue Opportunity

YorkNet’s Build it Model

- Building dark fibre and leasing to others
- Co-building in rural areas allows private internet service providers to deliver high speed internet to new areas and enables government to address specific needs

Funding Options

- Canadian Radio-television and telecommunications Commission (“CRTC”)
- Province of Ontario (awaiting details)
- Connect to Innovate (“CTI”)
- Investing in Canada Infrastructure Program (“ICIP”)

*NORTHEAST SUPERIOR REGION
BROADBAND NETWORK
("THE NETWORK")*

MELANIE PILON - ECONOMIC
DEVELOPMENT OFFICER,
CORPORATION OF DUBREUVILLE

The Network is comprised of 10 First Nations and Municipal Communities.

All members signed a Collaboration Agreement before Phase 1.

Phase 1 - Detailed Analysis - Completed

Phase 2 - Secure Vendor Partners - in Progress

Phase 3 - Secure Funding - In Progress

Phase 4 - Project Implementation

Where to Begin:

- Commission a feasibility study to assess the benefits of creating an Internet Service Provider ("ISP") tailored to meet needs of participating communities.
- Find out what infrastructure is in our areas I.e.: Bell, Shaw, Vianet, Eastlink, etc.
- Find the backbone of broadband (fibre) (dark fibre)
- Secure the expertise of a Regulatory resource
- Compile a budget

Recommendations:

- **Take the lead in the upcoming "Closing the Gap" funding application**
- **Bring service providers on board as partners**

BRIDGING THE DIGITAL DIVIDE

CONCLUSIONS AND RECOMMENDATIONS

The Federal Government has mandated a 50 MBPS Download Speed (“DS”) and a 10 MBPS Upload Speed (“US”) for internet Canadian users no later than the year of 2030.

At present, we are not capable of obtaining these speeds without a significant infusion of time, expertise and of course, funding. Attending the Conference on Rural & Remote Broadband was a valuable investment in learning how to obtain faster and more economical internet for our area.

The information gathered supports our current initiative to join the Huron North Communities to position ourselves as one of the forerunners in collaboration to achieve success.

Next Steps:

Invite presenters with expertise in regional collaboration and guidance to develop our internet network.

Fibre build is the way to go and bury for longer life and flexibility.

Build your own towers to assist in getting high speed to remote areas.

