Company Background

• Service provider based in Waynesboro, Virginia
  ✓ Deploying FTTP networks within central & western portions of Virginia since 2006
  ✓ Currently expanding FTTP markets

• A division of Segra, a fiber infrastructure operator serving the Mid-Atlantic region in the U.S.
COVID-19 Trends and Observations

Speaker: Rob W. Cale, Senior Director Product & Marketing
MULTIFAMILY CONNECTIVITY

In The Age of Social Distancing

Wednesday May 13, 2020 | 2:00 PM EST

spoton® networks
Products & Services

**Managed Wi-Fi & Wi-Fi Calling**
- Unlimited data streaming
- Seamless Wi-Fi Calling
- Property-wide coverage
- 24/7 support
- 24/7 monitoring & NOC
- Equipment replacement

**CellBoost® Passive DAS**
- Carrier agnostic
- Quick to install
- No approvals required
- 24/7 support
- 24/7 monitoring & NOC
- Equipment replacement

**Public Safety Radio Coverage**
- Site survey, design, provisioning, installation & requirements
- Certification of system
- All work with AHJ
- Annual recertification
- 24/7 support & NOC
Spot On’s Covid-19 Response

- Spot On Networks is proud to have taken the FCC’s pledge to “Keep American’s Connected”.

Spot On has committed to:

- Not shut off any customers due to non-payment
- Not charge late fees for customers who need to defer payment

- Spot On has gone above the FCC pledge requirements, committing to keep customers at their existing SLA’s (we will not reduce speeds or device access)
- Spot On is working with our hospitality customers that are donating rooms to medical workers to donate wireless connectivity
- Continue to monitor backhaul utilization to ensure enough capacity is available to handle the significant increase in data requirements due to the change in environment.
Apartment Residents: The New Normal

- Working from home
- Primary school from home
- College from home
- Video chats with friends and family
- Telehealth
- Streaming content
- Voice calls from home
- Attending online events
The New Normal Is Here To Stay

- Regulations and cultural shifts are indicating that the “new normal” is here to stay
- Every resident will need the capability to work and/or attend school from home
- Residents will choose properties that afford them the ability to work/school from home
- Residents will expect their property to provide them with service
- Every building will need advanced connectivity services to handle increased package delivery, social distancing and other shopping services
Wireless Connectivity

What we have observed

- Residents living at properties where we have installed a managed Wi-Fi solution use many different types of devices now.
- We have had to increase backhaul bandwidth to accommodate more users and greater capacity requirements.
- Building owners that provide residents managed wireless connectivity throughout the building seem to have few complaints.
- Amenity area data usage dropped significantly as people tended to stay in their apartments.
Connectivity Requirements
The New Normal – not different – just more

- High-speed Wi-Fi access throughout the entire property
  - Security
  - Guaranteed SLAs and bandwidth allocated to devices
- Ability to make voice calls over Wi-Fi throughout the property
- Seamless roaming
- Units with own private/ secure mini-network
- In-unit, amenity & operations IoT devices
WiFi6 Implications

- OFDMA solves interference issue in dense environments
- Added features increase the device capacity within a given access point range
- Reduced battery usage of connected devices, including IoT devices
- Allocation of an additional 1 Ghz of spectrum in the 6 Ghz band
- 4x more throughput per user/ up to 40% faster throughput/ 4x increased network efficiency
- The implementation of WiFi6 will help to support the “new normal” in dense multifamily environments
“Carrier-Grade” Wireless Services Needed for the New Normal

- AP is only as good as the backend architecture and monitoring supporting it
- Network architecture needs to be tested in real world scenarios, especially for voice – “one-size-fits-all” network design approach is insufficient
- 24/7 monitoring and support with back-up reporting on network usage is a must
- Ability for remote fix
- Wi-Fi Calling best practices: Voice Packet Prioritization & Quality of Service
- Tessellated Grid is a MUST for Wi-Fi Calling
- Roaming and handoff are MUSTS for Quality of Experience
Centralized Network Design

- “Carrier Grade” minimizes signal and channel interference
- Supports a secure & seamless multi-use network
  - Operational Services (HVAC, A/V, leasing apps, door locks, security cameras, etc.)
  - Data and streaming services
  - In-Building voice
- UPS allows network to stay on during power outage vs. individual networks in the units – so residents always remain connected with voice and data services
CISCO VNI Statistics 2020

- Mobile data traffic has grown 53% in the last 5 years
- The average Internet household will generate 140% more traffic this year than in 2015
- Globally, there will be nearly 628 million public Wi-Fi hotspots by 2023, up from 169 million hotspots in 2018, a fourfold increase.
- Wi-Fi speeds from mobile devices will triple by 2023 from 30.3 Mbps in 2018 to 92 Mbps by 2023

Stay Safe.
Stay Healthy.
Stay Connected.
Upstream Network Impact of COVID-19

Presented By: Bryan Rader | President
Impact of COVID-19

Bryan Rader I President Upstream Network

• To Our Company and Team;
• To Our Customers and Communities;
• To Our Clients.
Our Company and Team

- New Procedures for everything – cleaning, testing, entering customer’s homes.
- Frequent Communication with our team and on-site contact points.
- Limiting construction projects to exterior work only.
- Work remote status for all associates.
- Patience, empathy, responsiveness.
Our Customers and Communities

• Shift in Usage Patterns – up 30% across portfolio.

• Fewer transactions (truck rolls) but still consistent help desk support.

• New “digital habits” across different resident groups:
  
  _Condos/HOAs:_ active retirees using new health care services, shopping, educating, entertainment.
  _Students:_ on-line learning/classes.
  _Upscale/middle market Apartments:_ higher usage across all dayparts, with “work from home,” “stream from home” and “game from home.”
Our Clients

• First priority is safety/health of community. Closing amenity spaces, lobbies, etc.

• Economic impact – rent collection, HOA fees, market impact caused by pandemic.

• Looking at “bulk internet” through a different lens: no longer an option, but now a real need for residents.

• Infrastructure matters even more: ethernet better than DOCSIS. Fiber to the home best of all.
Serving customers in 11 states from Maine to Florida.
Cogeco operates in Canada under the **Cogeco Connexion** name in Québec and Ontario, and along the East Coast of the United States under the **Atlantic Broadband** name.

- 1,400 Atlantic Broadband Employees, 3,700 including Cogeco.
- The Corporation provides residential and business customers with internet, video, phone, and fiber connectivity services.

**CCX:** #2 provider in Ontario & Quebec

**ABB:** #8 provider in the United States
1) First priority is safety for employees and our customers
2) Implementation of precautionary measures in keeping with CDC and federal, state and local guidelines.
3) We conducted extensive business continuity preparations to ensure that our residential, business, enterprise, hotel/motel, MDU and carrier and wholesale customers will continue to have access to vital services as the situation evolves.
4) Made operational adjustments to reduce person-to-person contact
5) Use of Virtual Meetings to maintain communication with team members, clients and prospects.
PROTECTIVE MEASURES

Technicians:

• In-home for essential purposes only
• Hand wash kits on all trucks
• Gloves
• Face Masks
• Social distancing while in home, limiting contact with surfaces touched in home.
OPERATIONAL ADJUSTMENTS

• Remote Care: We’ve mobilized our remote operations plan while continuing to assist customers by phone, chat, email and web meetings.

• Front Counter Closures: To limit the spread of the COVID-19 virus, Atlantic Broadband closed its front counters on March 18 and redirected customers to easy online payment options to eliminate the need for them to travel to office locations.

• Virtual Support: The company has deployed remote virtual support tools (TechSee) that allow care agents and technicians to assist customers in real time via a live, interactive video streaming without the need for an in-home appointment. Since we’ve implemented it—to more than 500 of our agents—we’ve dramatically reduce the need for truck rolls and in-home visits.
OPERATIONAL ADJUSTMENTS

• Expansion of Self-Install Options: In order to reduce the need to deploy an installer to the home, Atlantic Broadband has deployed new self-installation options for services that do not require in-home technical support.

• Call Ahead Verification: Atlantic Broadband agents are calling ahead before in-home appointments to assess the wellness situation in the household. Technicians also re-confirm this at the door on the day of the appointment if inside work is necessary.

• Tech Dispatch from Home: To avoid unnecessary trips to our offices, our technical team is taking their vehicles home each day and stocking those vehicles to avoid warehouse stops.
Our investment in our fiber-broadband infrastructure has provided Atlantic Broadband with the necessary network bandwidth capacity to minimize disruption and to accommodate increased levels of demand that will occur during this time.

Likewise, our investment in redundant paths will ensure high levels of reliability across the network.

Our network engineers are actively monitoring traffic to ensure ample capacity for high performance even in cases of increased data activity that will occur during the COVID-19 outbreak.
In the immediate aftermath of the COVID-19 outbreak:

- Internet traffic from Atlantic Broadband customers increased approximately 25%, with some areas exceeding 30%.

- Netflix experienced bandwidth usage nearly 60% higher, with some evenings seeing peaks 80% higher.

- Video on Demand (VOD) usage increased by 50%.

- Overall usage on the company’s video platforms was higher not only during the typical peak period of primetime, but also throughout the day, with those peaks extending for longer periods of time.

- While there has been a flattening since, heightened usage levels are expected to continue while business and residential customers are staying at home, as needs for educational, work and entertainment resources are high.
The Atlantic Broadband network is managed from a state-of-the-art Network Operations Center in Rochester, New Hampshire. In addition, the company maintains a back-up Network Operations facility and network management team located in Uniontown, Pennsylvania.

- Major investment for best-in-class network
- Headend Modernization
- MPEG 4/IP Linear Readiness
- Fiber ring interconnectivity for efficiency in signal delivery, improved redundancy and reliability.
- Continued backbone hardening for redundancy & diversity
KEY TAKEAWAYS

- Internet connectivity has become the first priority for MDUs, businesses, residences of every kind as online education and Work-from-Home drives usage.

- The adjustments made in the last 8 weeks have ensured the safety and well-being of our teams and customers, while keeping customers connected to vital services.

- High-capacity, fiber-rich broadband networks are crucially important because they are uniquely able to meet surges and sustained increases in demand.

- Virtual Assist, self-care and self-installation options will be the norm while the COVID-19 outbreak is active.

- The adjustments made for the COVID-19 outbreak will likely be adopted even after the outbreak subsides.

- Communications providers like Atlantic Broadband that offer bulk services to MDUs are adapting to a new reality by maintaining virtual connections with prospects and clients to ensure that needs are being met.