A MUNICIPAL CASE STUDY OF TAKING 10 GBPS TO THE AIRWAVES
Who is Castle Rock Microwave

- Brett Bonomo – founder at Castle Rock Microwave (2014), 15yrs in microwave manufacturing
- Regional Wireless Systems Integrator Bridging the Digital Divide
  - Rural Broadband
  - Municipal / County Broadband
  - Industrial Broadband
  - 911 Resilience
  - Life Cycle Services
  - Network Operations

What is a System Integrator?

Turnkey Solutions and End-to-End Solutions

Discovery
- Feasibility Studies
- Budget Estimates
- Desktop Designs
- Coverage Maps

Design
- Site Surveys
- Fiber Backhaul Defined
- RF Planning
- Equipment Selection
- Network Design
- Final RF Design
- Drawings and SOW

Deploy
- Hardware Purchase
- Project Management
- Training
- FCC Coordination
- Installation of Equipment
- Tower Construction/Services
- Configuration/Optimization
- Documentation

Support
- Management Software
- Customer Service
- ISP Set-up Services
- Network Operations
- Training
- Preventative Maintenance
- Break/Fix
- Updates
What was the challenge for Aurora

- Aging, unsupported wireless infrastructure
- Applications and Capacity needs
- Limited City staff resources
- CARES Act funding deadlines
- Facilitate remote learning at public buildings
How was the solution planned against alternatives

- Fiber takes too long and too expensive
- Cambium as a single-source solution, 60 & 80GHz
- Capacity requirements, >1Gbps, 10Gbps
- Leased lines not available
- Wireless design started in 2019 (pre-COVID)
What was the installation like

- Site access challenges
- Weather
- Short deadlines (end of 2020 for funding)
- Design
- Supply chain considerations
- Familiar form factors and GUI
- Coordination with customer and switch upgrades
- Alignment
- Features - bridge in IPv4
- Continuity with CoA staff
- Diligence and accuracy in procurement, installation and as-built documentation
- Customer acceptance
What are the results

• Connectivity created or improved at 40 end points, >30 links
• 1.8 to 10Gbps capacity on all links
• Project completed under budget! And on time
• Monitoring and on-going maintenance
• Satisfied customer
• Facilitated remote learning for students in opportunity zones
• Future expansion!
QUESTIONS?

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