TCCOG Presentation

September 25, 2020

Introduction & Overview of Southern Tier Network

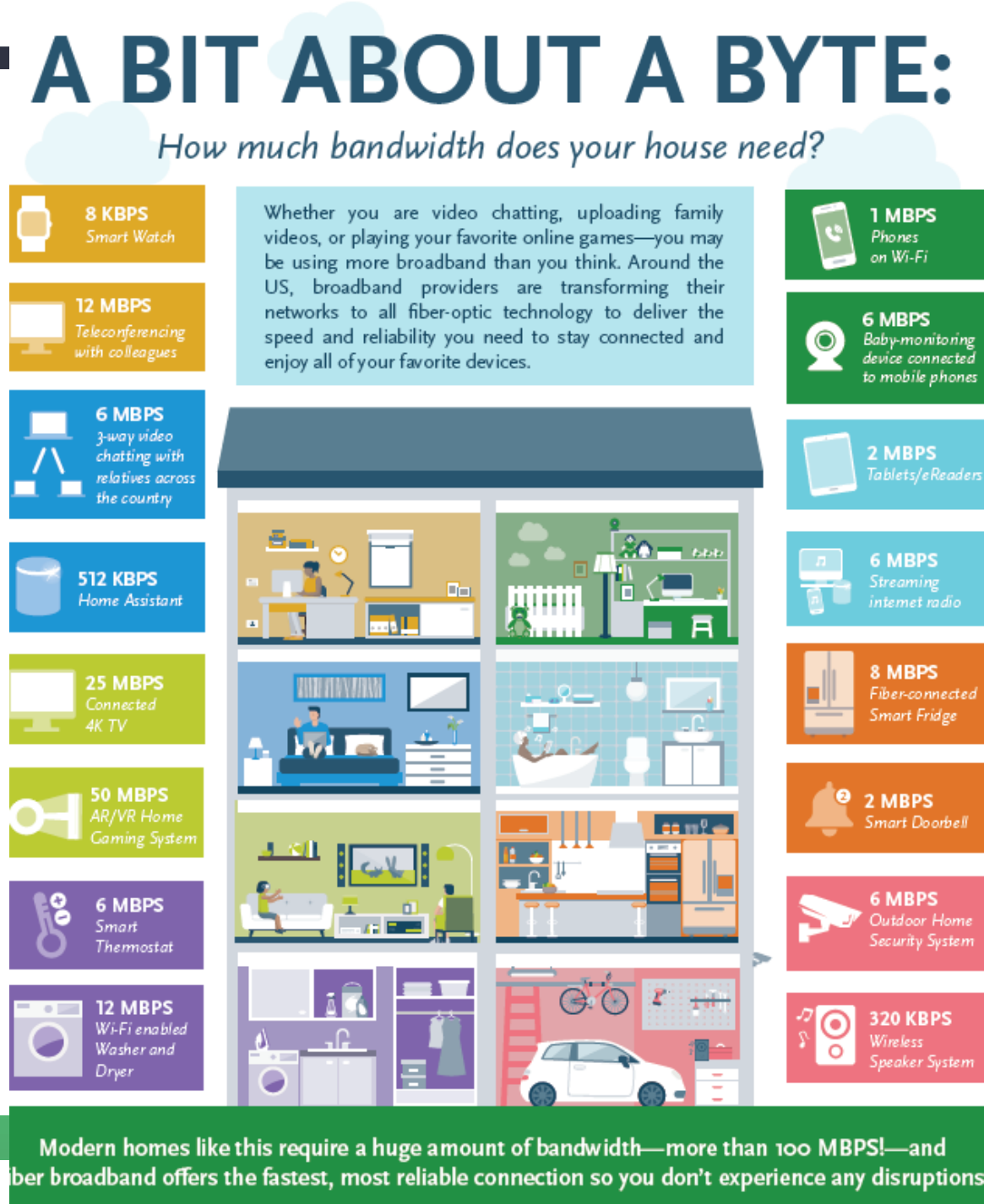
BROADBAND – It's a MUST HAVE

- The '5TH Utility'
- BB is the Indispensable Infrastructure of 21st Century
- Ultra High-Speed Networks Needed
- Money is a Barrier to Build-Outs & Operational Sustainability
- Communities Need to Step Up – Make Sure BB Occurs in their Region
- Competition is Critical (*No Choice – No Broadband*)
- Competition Drives Deployment
- Two Carriers is Not The Definition of Vigorous Competition
- Telco's & Cable TV Operators Alone will not make BB occur ubiquitously
- Internet of Things: 10 – 13 Smart Devices Per Household (and growing)

THE FUTURE

Internet of Things

- The network of physical objects that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data.
  - Artificial Intelligence
  - “Hey Google” or “Alexa”
  - Appliances
  - Home Security Systems
  - Exercise Equipment
  - Smart watches/phones/TVs (4K/8K)
  - Gaming - Augmented and Virtual Reality
  - Smart Cities
  - Autonomous vehicles
  - Dynamic traffic control



Digital Economy – Is Disruptive: $$$$

14 Years: How long it took Facebook to grow from a campus dorm room project to a $30 billion business with 2 billion users – worlds most popular media provider – creates no content

AirBNB: The World's largest "hotel company" – owns no real estate

UBER: The World's largest "taxi company" – owns no vehicles

Alibaba: The World's "largest retailer" – stocks no inventory

Malls: From 2010 – 2013 Mall visits fell 50%

Dept Stores: Since 2001 have lost 18 times more workers than coal mining

STN Overview

STN is:

- A not-for-profit, 501(c)(3)
- A municipal asset, affiliated with County government
- A local development corporation, a charitable organization
- A Middle Mile, Dark Fiber, Open Access Provider
- Leased Fiber available to all viable entities
- Oversight – Board of Directors
- Civic and Community Purposed

WHAT IS OPEN ACCESS - MIDDLE MILE?

AND HOW IS IT HELPING US?

- High Capacity Fiber Cable Interconnecting Towns, Cities, Municipalities, Counties
- Open to any Carrier, Service Provider, Enterprise, Business, Organization
- Low Cost Entry Into New Markets; Promotes Competition
- Dark Fiber: Allows Service Provider/Customer to Control Speed, Traffic, Content, Services

STN Overview

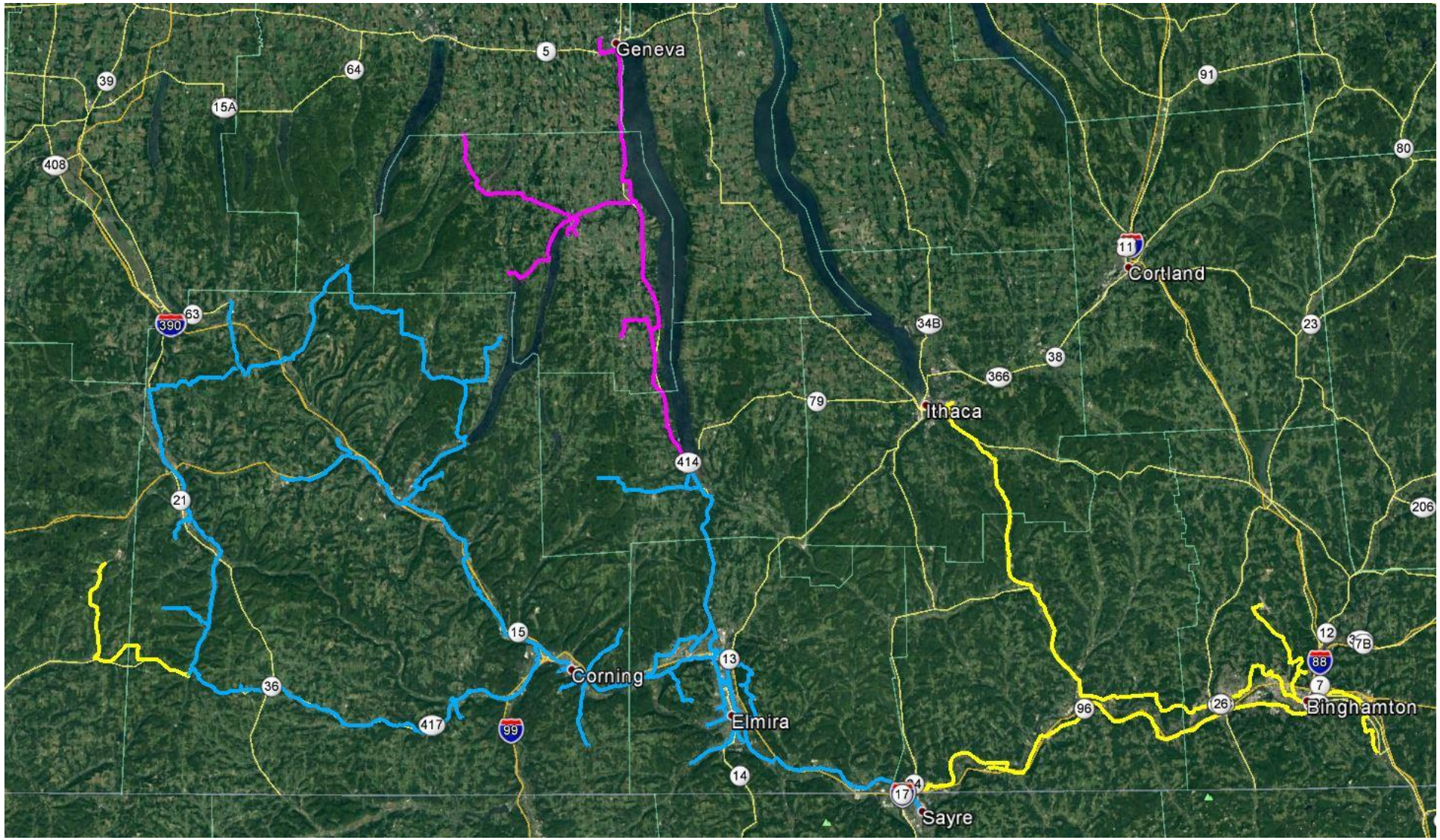
- Started January 2011
- Original Business Plan 235-mile fiber network
- Resulting from collaboration among:
  - The Southern Tier Central Regional Planning and Development Board,
  - Chemung, Schuyler, and Steuben Counties
  - Corning Incorporated
- Open Access Dark Fiber available to all viable entities

STN Overview

- January 2013 Yates County Inquired
- Business Plan 78-mile fiber network
- Resulting from collaboration among:
  - Yates County
  - NYS Empire State Development ($2.5M)
  - STN Board of Directors
- Open Access Dark Fiber – Interconnecting STN 3 County Network to Yates County
- STN Grew to 360 miles; 4 County Network

STN Overview

- December 2015 REDC Initiative to Build into Broome & Tioga Counties, Universities
- Business Plan 140-mile fiber ring
- Resulting from collaboration among:
  - Broome County, Empire State Development, ST 8, Broome County IDA, and STN
  - Open Access Fiber ring through Tioga County, Broome County, Interconnect Cornell, Binghamton, and Alfred Universities
  - Broome County
  - STN – 525+ Mile Fiber Network


Geneva
Cortland
Ithaca
Corning
Elmira
Binghamton
Sayre
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Why was the Network Funded and Built?

- Support the needs of public safety
- Improve Broadband access in the rural underserved areas
- Increase competition and the level of telecommunications services throughout the region
- Lessen The Burdens of Government
- Economic Viability (Attract,Retain,Create Jobs)
- Enhance Education & Health Care
- The New Essential Utility
- Municipal Based and Operated

Our Mission

Enable universal access to affordable broadband services and promote economic growth in the regions we serve.

Our Vision

STN will achieve its mission by building coalitions among public and private organizations to construct and maintain low cost, open access broadband infrastructure to drive economic growth and universal access to affordable broadband services across the region.

STN: Municipal Value & Benefits

- STN – relationships with National and Local Companies & Suppliers;
- Aggregation of Multiple Counties – Collaborating Together, Interconnected Fiber Network- Creating Size and Clout;
- STN Partners with Multiple Carrier and Service Providers;
- STN is **Not** a Service Provider (ISP, Cable, Telephone);
- STN **Is** a Wholesaler of High Capacity, Private/Secure Fiber Strands;
- Stability – A Municipal Organization; Long-Term Presence / Vision;
- Industry Volatility - ripe with acquisitions, mergers, bankruptcy (Access Ontario, FLTG, Time-Warner, Frontier)

Southern Tier Broadband Coalition

- County leadership from Schuyler, Steuben, Chemung, Tioga, and Yates together with local businesses and residents have recognized that universal access to affordable, reliable, high-speed broadband is an essential service.
- Recognizing the complexity, cost and expertise that is required for this initiative, it was determined that collaborating as a coalition would benefit all of the counties.
- Inter-Municipal Agreement – charging STN to coordinate, contract, & manage a regional feasibility study.
- Engaged Fujitsu Network Communications, Inc. – along with Corning, Inc. to Develop a Broadband Feasibility Study

Municipal Value & Benefits to the Coalition:

- Infrastructure Ownership (municipal)
- 100% Fiber Optic Infrastructure
- Open Access is a 'Monopoly Buster' - Entice & Attract Multiple Carriers and Service Providers
- Political Strength / Clout
- Economies of Scale
- Efficiencies in Design, Build, Construction
- Operational Efficiencies - Operational Costs; Repairs; Legal/Contractual; "Co-Op Pricing/Discounts"
- Continuity of Infrastructure between Counties; Increases Interoperability
- Attraction to Carrier / Service Providers and ISP's
- Facilitation of Increased Shared Services
- Increased Points with Grant Funding Sources
- Model for Replication

FEASIBILITY STUDY

- SOUTHERN TIER BROADBAND COALITION: Summer 2019 Workshops with Nokia and Fujitsu; Corning, Inc. Sponsored.
- FUJITSU STUDY:
  - STN Funded 50% of Study; Each County Contributed Share
  - Deliverables:
    - Market Assessment
    - Business / Operational Models
    - OSP & ISP Design
    - Operations & Maintenance
    - Financial Pro Forma
      - Cost to Design,
      - Build,
      - Operate, and Revenue Generation

Conclusion

- Thoughts
- Additional Questions