

BROADBAND SUMMIT

2019



VCTA

Broadband
Association of Virginia



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SUMMIT**

2019

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DHCD- Helping Locals Plan and Build



Evan Feinman
Chief Broadband Advisor



Courtney Dozier
Deputy Broadband Advisor



Making the Business Case for Broadband



Dave Coombs
Comcast Business
Services



Matt Smolnik
New Kent County



Thom Watkins
Cox Business



Craig Venable
Shentel Business



MAKING THE BUSINESS CASE FOR BROADBAND



Residential

VS.

Commercial





**BROADBAND
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Deploying Commercial Broadband



Permitting



Top Barriers

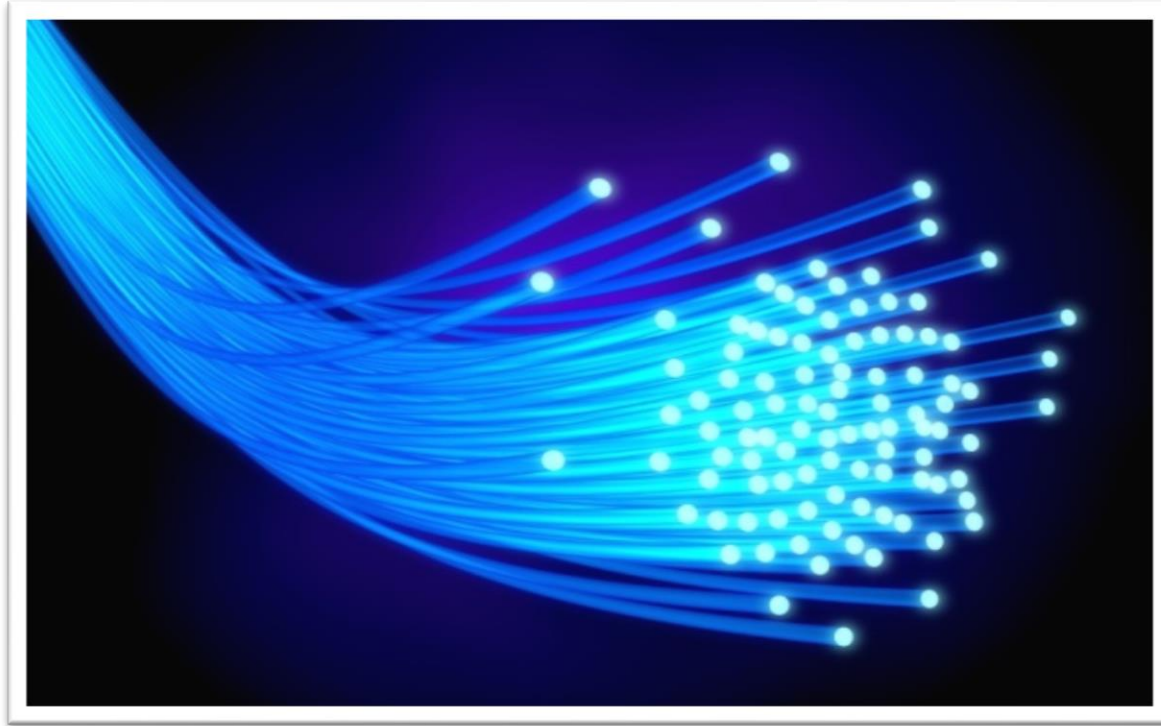


Redundancy

vs.

Diversity

Fiber



Commercial Anchors

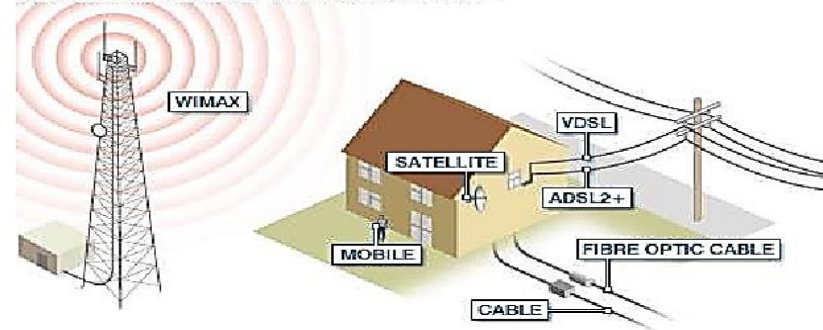


Managed Services



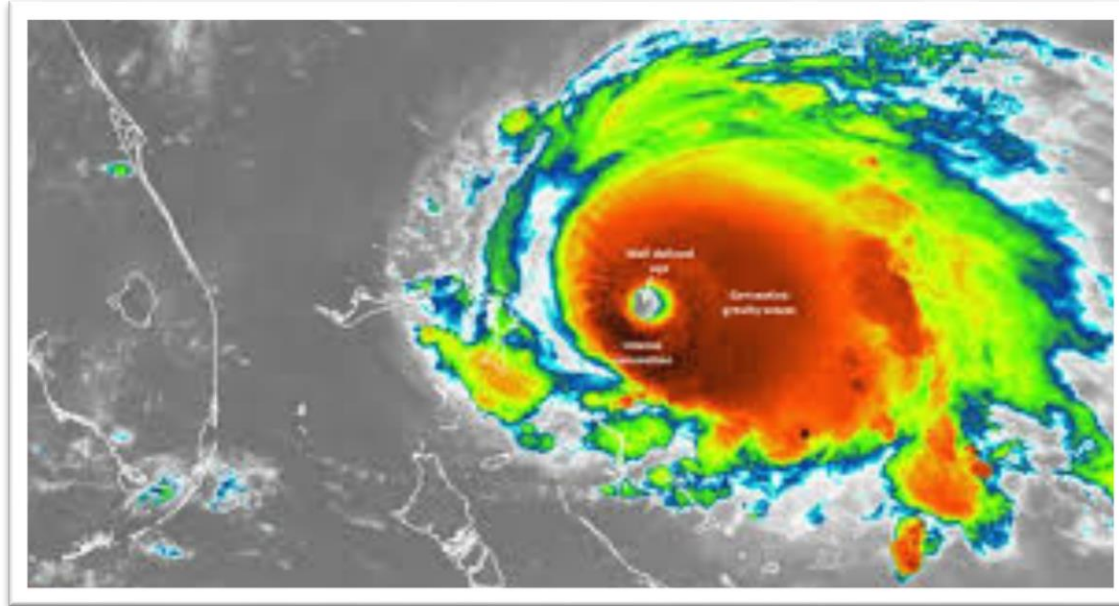
Types of Broadband Wired & Wireless

HOW FUTURE BROADBAND GETS INTO THE HOME



Source: BBC News <http://news.bbc.co.uk/2/hi/technology/8069768.stm>

Storm Preparedness



Greenfields



Case Studies on VaTI and Tobacco Commission Grants



Barrett Stork
Cox Virginia



Terry Ellis
Comcast



Scott Randall
Atlantic Broadband



Jimmy Carr
All Points Broadband

Rural Broadband Deployment— Comcast as a Partner

Terry Ellis

VP Government & Regulatory Affairs

Comcast



Aspects That Promote Wide Participation in Broadband Grant Programs



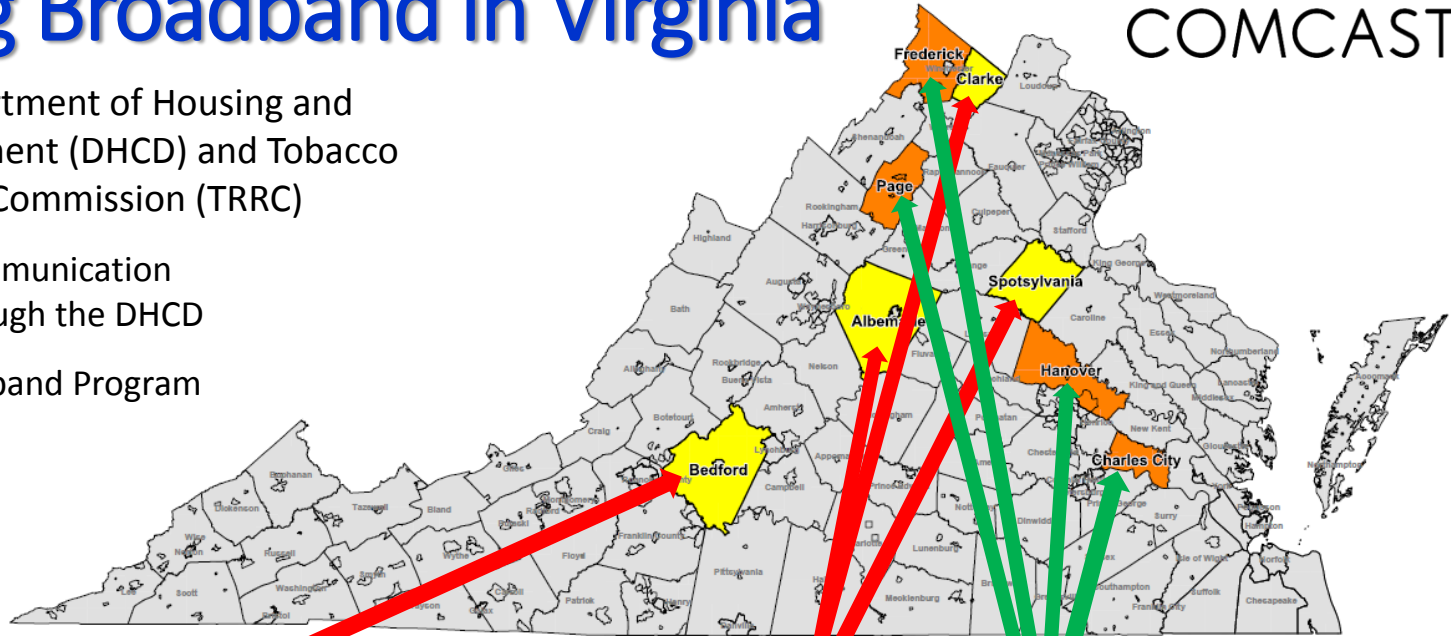
- Target unserved areas for best use of scarce funds
- Technology neutral (and not limited to ETCs)
- Competitive bidding to reach the largest number of locations at the highest possible speed
- Flexibility in protecting taxpayer dollars (performance bonds, line of credit)
- Reasonable match requirement – “alters the economics”
- Reasonable construction timetable, with make-ready provisions

Expanding Broadband in Virginia



Partnering with Department of Housing and Community Development (DHCD) and Tobacco Region Revitalization Commission (TRRC)

- The Virginia Telecommunication Initiative (VATI) through the DHCD
- The Last Mile Broadband Program through the TRRC



\$3.5M
7,000 homes connected

\$800K
300 homes connected

2019 VATI
application pending
3,063 homes passed

VATI Project with Gloucester County

9-5-19

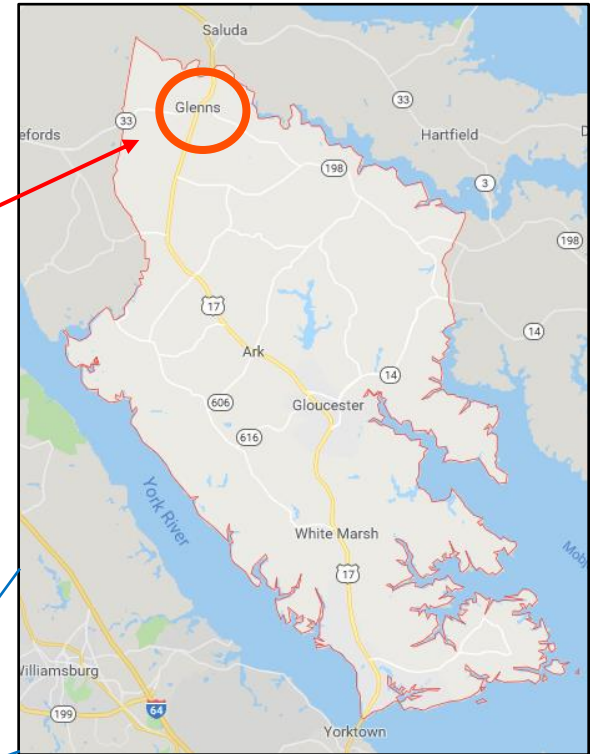
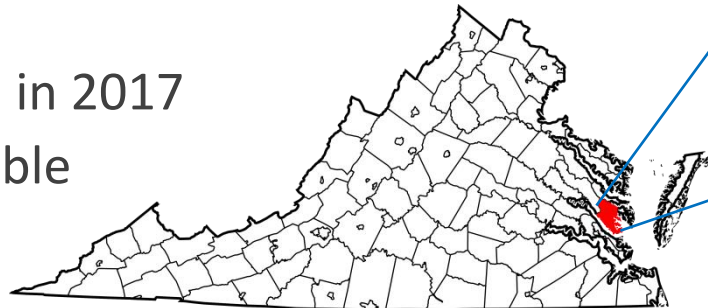
Barrett Stork
Director of Government & Regulatory Affairs
Cox Virginia



Cox Rural Expansion Project with Gloucester County

Virginia Telecommunications Initiative (VATI)

- VATI fund created in 2016 - \$1 million
- Partnered with Gloucester County in 2016
- 5.7 mile FTTH build in Glenns community
- Nearly 120 homes/businesses
- Project Cost - \$339k
 - \$193k - VATI
 - \$146k - Cox
- Project completed in 2017
- Gigabit now available



A photograph of a rural landscape at sunset. A paved road with a double yellow line curves through a green field. A dark wooden fence runs along the right side of the road. The sky is filled with orange and yellow clouds, with the sun low on the horizon behind some trees. The text "RURAL BROADBAND AND FIXED WIRELESS" is overlaid in large white letters.

RURAL BROADBAND AND FIXED WIRELESS

Broadband Summit
September 5, 2019

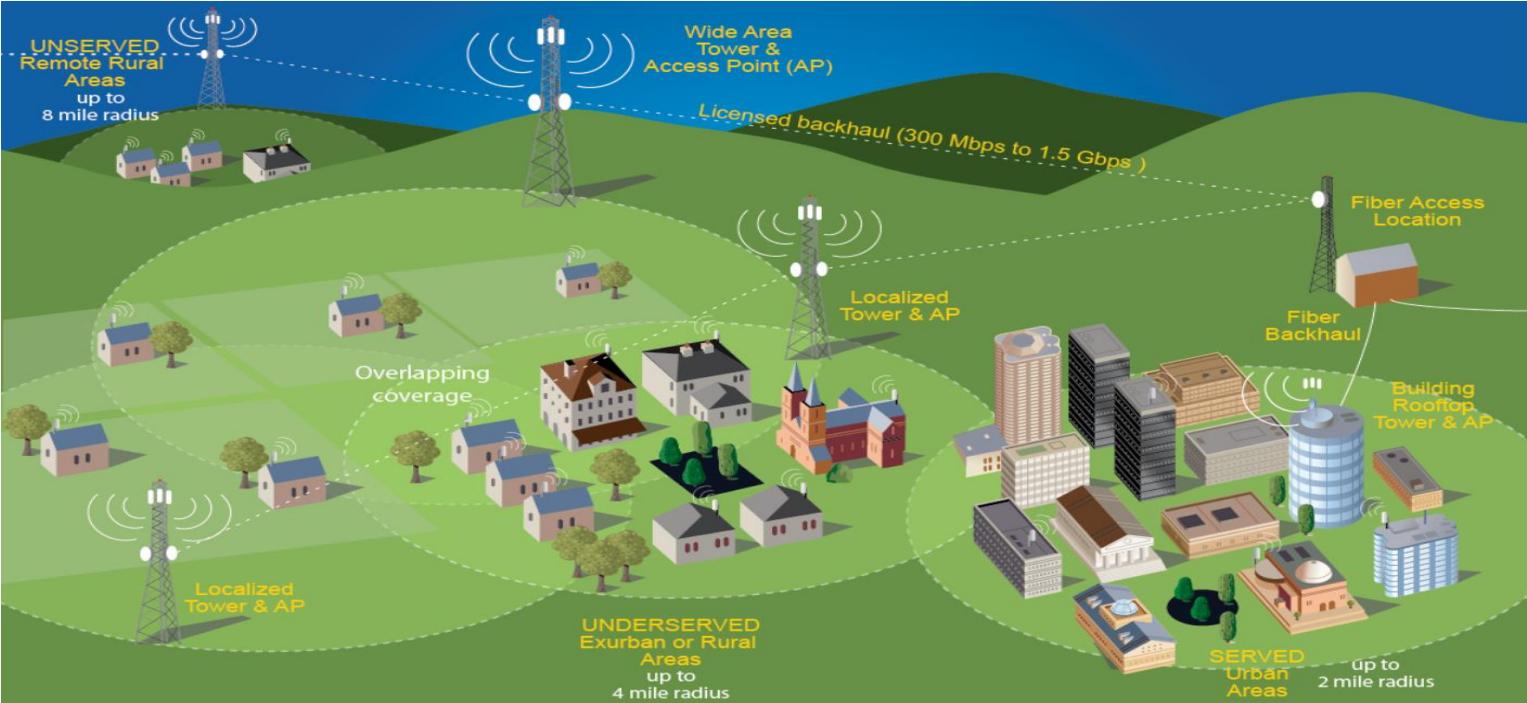
About the Speaker



- Fixed Wireless industry representative on the Virginia Broadband Advisory Council
- CEO of All Points Broadband, a Loudoun-based company is the largest fixed-wireless ISP in the mid-Atlantic, operating in VA, WV, MD, KY, deploying fixed wireless and fiber-to-the-home technology
- 2-time honoree on the *Inc. 5000* list of America's fastest growing privately-held companies (#1 ISP in 2018)



Fixed Wireless Network Overview



Broadband Deployment: Fundamental Principles

- Broadband delivery is subject to the laws of finance
 - *Broadband delivery is capital intensive – providers must make significant upfront investments to deploy networks and offer service*
 - *More than 50% of these capital costs are in the “last mile” – between the distribution network and the home*
- Broadband delivery is subject to the laws of physics
 - *All access technologies have pros and cons (cost, capacity, reliability)*
 - *Fixed wireless can be deployed and upgraded faster than other access technologies*
 - *Fixed wireless is limited by the availability and propagation characteristics of RF spectrum*

Rural and Semi-Rural Broadband: Common Misconceptions

- Misconception: Megabits per second (example: 15 Mbps) is a measure of speed
 - *Reality: Mbps is a measure of a connection's total capacity – how much data can flow through the “connection” at any given time*
 - *Reality: If you have a 15 Mbps connection and are streaming two HD videos at the same time over that connection (using $2 \times 5 = 10$ Mbps), you have 5 Mbps of available capacity. A consumer will not notice any change by purchasing a 50 Mbps connection.*
- Misconception: “Speed” (which is connection capacity) is the limiting factor in most areas
 - *Reality: For many residential users in rural and semi-rural areas, sufficient connection capacity is available for common applications (streaming video)*
 - *Reality: The limiting factor for residential consumers in rural markets is data-allowances (total data transmitted each month): typical households consume 150-200GB of data each month, which is not available from satellite or mobile-based offerings*

Rural and Semi-Rural Broadband: Common Misconceptions

- Misconception: There is inadequate long-haul and middle-mile fiber in most rural markets
 - *Reality: There is significant long-haul and middle-mile fiber in most of Virginia.*
 - *Reality: The principal issue for the digital divide is the “last-mile” (connecting individual homes to distribution networks). Last-mile costs represent more than 50% of the capital investments to deliver broadband.*
- Misconception: “Open-access” middle-mile networks offer a *magic bullet* in unserved or underserved markets
 - *Reality: There is no magic bullet*
 - *Reality: Access to distribution represents only 5-10% of an internet service provider’s recurring cost of service delivery*

The Federal Communications Commission is Advancing Fixed Wireless

- 5G is coming – most of the early action will be in fixed wireless
- In the FCC’s most recent rural broadband support mechanism:
 - *More than 50% of funding was awarded to fixed-wireless operators*
 - *Fixed Wireless will offer download speeds of 25 Mbps to 100 Mbps*
- The FCC is in the process of making licensed, “mid-band” spectrum available for fixed wireless and other uses
 - *Mid-band spectrum enables fixed wireless to offer increased speed and improved reliability*
 - *Mid-band spectrum gives fixed wireless the ability to offer service through trees and foliage (non- and near-line-of sight)*
 - *Overcoming the most significant obstacle to fixed wireless service delivery*

Strategies to Support Additional Investment and Deployment

- For the public sector:
 - *Collaborate with and support the local providers who are already investing in the community so that they will increase their investment*
 - *Facilitate the deployment of new infrastructure to expand access*
 - *Adopt strategies that reflect the fundamental laws (finance & physics)*
- Role of Providers:
 - *Support efforts to improve broadband mapping and data availability*
 - *Participate in public-private partnerships and identify barriers to investment*

Broadband Affordability Programs



Sarah Buck
Cox Virginia



Marie Schuler
Comcast



Eric Collins
Charter
Communications



Program Details

- Low-cost, home internet with wifi for \$9.95/mo.
- Nationwide roll out in 2013
- Open to eligible low-income families

Successes

- Endorsed by FCC Chairman Pai
- National Partnerships
- Nearly more than 450,000 people connected to in-home internet since 2013 nationwide
- Survey results indicate C2C is making a difference

internet >> essentials

FROM COMCAST

Internet Essentials: Eligibility and Expedited Review

Since the initial launch in 2011, program eligibility has expanded 11 times. For the Fall Tour, we will expand again. Internet Essentials will now be available to even more low-income households beyond those participating in the National School Lunch Program and receiving housing assistance, including Medicaid, SNAP, SSI and others. This expansion includes seniors and people with disabilities, and doubles the number of households eligible.

Core Eligibility:

- 1) Live in an area where Comcast Internet service is available.
- 2) Have not subscribed to Comcast Internet within the last 90 days.
- 3) Have no outstanding debt to Comcast that is less than a year old.

LOW-INCOME HOUSEHOLDS

receiving public assistance



EXPEDITED REVIEW

3 distinct review processes



Students attending Title I schools



HUD households with addresses shared by HUD



Low-Income households in high-poverty areas

Future of Broadband



Rick Cimerman
NCTA- The Internet &
Television Association



FCC Overview



Alan Tilles
Shulman Rogers



Utility Middle Mile Pilot Program



Ron Jefferson
Appalachian Power
Company



Nathan Frost
Dominion Energy

