

Tom Evslin

Senate Finance Committee

2/10/22

Relevant Experience

- Developed first automated clearing house software for banks, first email client for Apple Macintosh
- Vermont Secretary of Transportation (1981-1982)
- Responsible for development of Outlook and Exchange at Microsoft
- Led development of AT&T Worldnet ISP which popularized all-you-can-eat pricing
- Founded ITXC, largest wholesale VoIP company
- Vermont Stimulus Czar (2009-2010)
- Retired and developing free shareware for measuring ISP performance
- Not associated with any ISP or supplier to ISPs

Topics

- The broadband affordability barrier
- The broadband knowledge barrier
- What does good service mean?
- A radical proposal to speed rollout and increase reliability

Broadband Affordability Barrier

- Most Vermont families live in areas where broadband is available
- Both installation and monthly fees are a barrier to low-income families, particularly in rural area
- The road out of poverty requires broadband
- But subsidies are available

Federal program

Stay Connected with the FCC Affordable Connectivity Program

December 14th, 2022

The Affordable Connectivity Program (ACP) is a [Federal Communications Commission \(FCC\) program](#) that replaces the Emergency Broadband Benefit Program (EBB Program) to help qualifying households pay for internet service and connected devices. If your household is eligible, you can receive up to \$30.00/month discount on your internet service.

Here are the ways your household can qualify for the Affordable Connectivity Program (ACP):

- Based on your [household](#) income
- If you or your child or dependent participate in certain government assistance programs such as SNAP, Medicaid, WIC, or other programs
- If you or your child or dependent already receives a Lifeline benefit

For more information and to apply, visit: wcv.com/assistance.

Comcast program

Essentials Plus From Comcast

Internet Essentials from Comcast brings affordable, high-speed internet to your home so you can have greater access to homework, job opportunities, healthcare and benefits, education resources and more. When you're connected, you're ready for anything.

Signing up is easy and fast from your mobile device at apply.internetessentials.com.

You may qualify if you are eligible for public assistance programs like the National School Lunch Program, Housing Assistance, Medicaid, SNAP, SSI and others.

What You'll Get

Internet Essentials includes:

- Internet Essentials: 50/10 Mbps internet service for just \$9.95 a month plus tax.
- Internet Essentials Plus: 100/20 Mbps internet service for just \$29.95 a month plus tax.
- No activation fees and no equipment rental fees.
- Option to purchase a computer for just \$149.99 plus tax.
- Access to free internet training online, in print and in person.
- A wireless gateway, delivering in-home WiFi at no additional cost.
- Access to Xfinity WiFi Hotspots.

Communication Union District Programs

Equal Access to Broadband



Access to broadband is critical for Vermont families with students and ten percent of Vermont households with school-aged children cannot afford broadband service. EC Fiber, an established and successful community-owned not-for-profit currently serving over 5,000 customers in central Vermont, sees the need to include low-income neighbors in the municipal broadband network, and has been providing subsidized/free service to some low-income households during the pandemic. EC Fiber supported the creation of the Equal Access to Broadband Foundation (EABF), with the purpose of facilitating quality broadband service to low-income families in Vermont. The Foundation turned to Vital Communities to help get the program going.

With Vital Communities's oversight, EAB piloted a subsidy program with a web-based subsidy registration tool, designed by EAB board member FX Flinn in collaboration with Rural Innovations Strategies, Inc., connecting families in Windsor and Orange counties to subsidies and affordable broadband.

Support EABF by contacting board chair Holly Groschner at holly@equalaccesstobroadband.org.

Read Holly
Groscher's
VTDigger Op-Ed on
the Project

Published 8/4/21

Knowledge Barrier

- Those without Internet don't know about programs, whom to apply to, or how to apply
- Application process and proving eligibility can be difficult and confusing
- Newly connected people don't have knowledge to use the Internet
- At least in other states, Comcast people not familiar with their own program
- CUD programs other than ValleyNet not in place yet

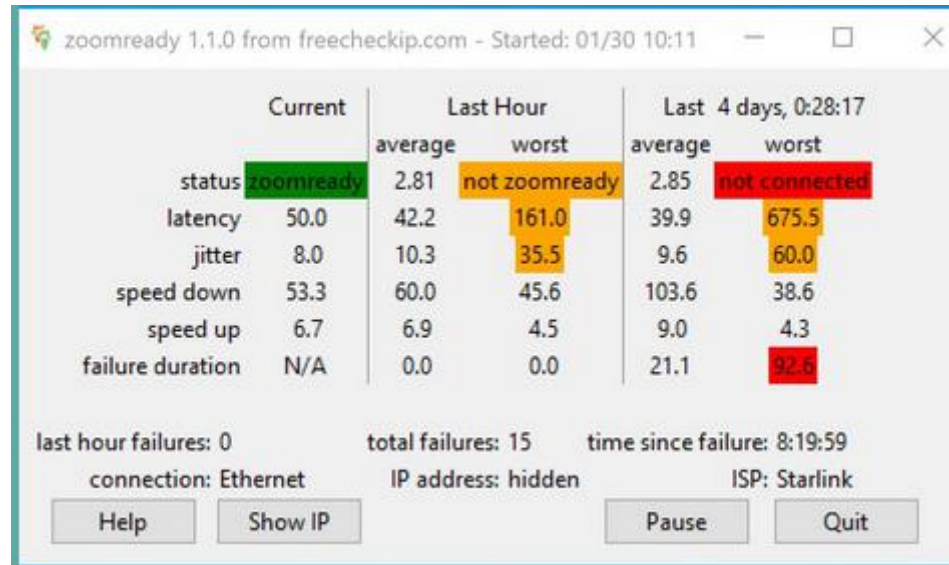
Recommendations to Overcome Barriers

- Fund programs within the CAP agencies
 - Identify unserved clients
 - Identify eligible providers
 - Identify funding sources
 - Get people connected wherever possible
 - Provide training
- Require recipients of funds through the State to provide low-income programs wherever they make service available
- It is not acceptable for families to wait five years for fiber and then find they can't afford it

Minimum Requirements

- Teleconferencing and streaming are the demanding apps
- 50 down, 5 up is good enough for most families today (will go up) but bandwidth is not everything
- Latency must be less than 75 milliseconds
- Jitter less than 15 milliseconds
- Fiber almost always provides sufficient bandwidth but latency and jitter depend on the ISPs connection to the rest of the world

Measurement is Everything



zoomready 1.1.0 from freecheckip.com - Started: 01/30 10:11

	Current	Last Hour		Last 4 days, 0:28:17	
		average	worst	average	worst
status	zoomready	2.81	not zoomready	2.85	not connected
latency	50.0	42.2	161.0	39.9	675.5
jitter	8.0	10.3	35.5	9.6	60.0
speed down	53.3	60.0	45.6	103.6	38.6
speed up	6.7	6.9	4.5	9.0	4.3
failure duration	N/A	0.0	0.0	21.1	92.6

last hour failures: 0 total failures: 15 time since failure: 8:19:59
connection: Ethernet IP address: hidden ISP: Starlink

Help Show IP Pause Quit

Radical Proposal – Underground the Utilities

- Putting fiber on poles is expensive and time-consuming (but often necessary)
- Poles fall down in storms
- There is massive funding for infrastructure including roads, utilities, and broadband
- Technology has developed which makes fault-detection and location underground cheap and easy
- Consideration must be given to undergrounding utilities as part of EVERY road project
- I completely failed to sell this idea to the feds when I was stimulus czar

Questions?