

***We're Tired of Being Unserved!***

# **Internet & Broadband Access**

What we have and what are our options?

## **INTRO**

Presented by Butler Smythe

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**Maine is 49<sup>th</sup> ☹️ for access to Broadband Internet**

**Disclaimer:** The Information provided is not intended to identify any one (or several) vendors or technologies which are preferred for any application or user. The intent is to clearly identify what is available today and their general capabilities. It also does not reflect technological limitations of specific services impacted by Weather, Lightening, Atmospheric, Trees, Proximity to Electrical Energy, etc.

# THE OVERALL GOAL(s)

- Provide consistent, cost effective and uninterrupted Broadband service to businesses, residents and other users on the Blue Hill Peninsula including Deer Isle & Stonington.
- Provide a Broadband service that meets the current and future growth of the FCC Broadband definition, and as defined by the Connect Maine authority.
- Support the needs of the community and ensure its viability and affordability in the future.
- To help enable discussion on the subject of Broadband, and more specifically Broadband for the Blue Hill Peninsula by:
  - Defining Broadband and our current options
  - Identifying future options
  - Addressing pro's and con's for each
  - Defining a Timeline for change
  - Seeking input
- Working as a group for a common solution prevents incompatible implementations from wasting time, energy and money that could be better directed!

# What can YOU do today?

## 1. Ask CCI for Bonded Service

- Multiple phone lines are combined to deliver greater down and upload capacity. For DSL only.
- There is a catch – not all modems are the same.

## 2. Turn OFF Auto Application (app) Updates for devices (i.e. smart phone, tablets, TV, etc.)

- your varying service problems will dramatically improve

## 3. Ensure you are paying for what you actually get

- Know who you get service from, what you are getting from them and what you are actually paying for.
- AND don't forget... learn to deal.

Your technician(s) are trying to do their best with what they have to work with.

**Test ANY Connection - [www.speedtest.net](http://www.speedtest.net)**

# How can you help?

1. Your Name
2. Your Street Location & Town
3. Your Contact Information – Email Preferred
4. Who is/are your wired providers – if you have no access to one please identify “wireless available only”
5. Your max available capacity
6. Are you willing to help in any way?
  - a. By filling out the form and/or enabling others to do the same - you are doing just that!
  - b. Want to help a bit more – we need you.

**Online Data Collection is Coming Soon**

## 'Three Ring Binder' route

A 1,100-mile fiber network providing high-speed Internet service to rural communities has been completed six months ahead of schedule and under budget. The \$31.7 million project, which included \$25.4 million in federal stimulus money, creates a high-speed core network that telecommunications companies can link to as they expand broadband service.

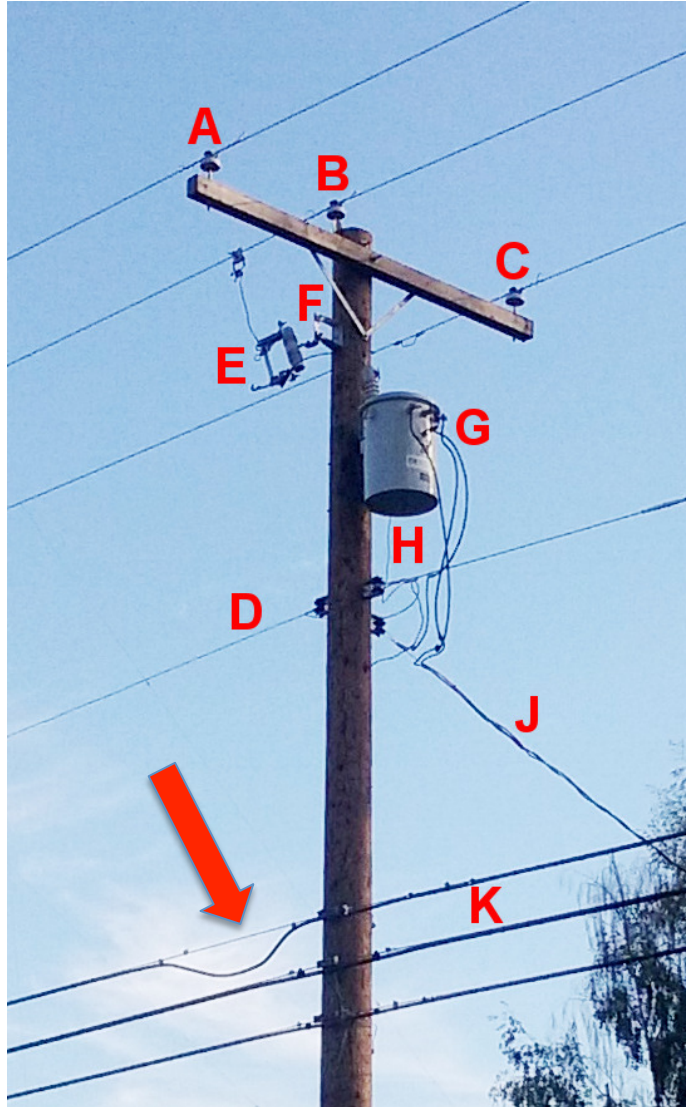


## Three Ring Binder (Maine Fiber Co.)

(2012) - Network roughly 185,000 strand miles (90% Uncommitted) entirely above-ground (29,000 "telephone" poles). Project is the "middle mile," & connects anchor institutions such as Univ. of Maine campuses & Internet service providers that sell bandwidth to individual customers. Internet service providers and telecom companies provide the "last mile."

\$25.4 million Federal stimulus grant, \$7.4 million - 75 private investors. Investments ranged from \$25,000 - more than \$100,000. Grant Funds set aside through the American Recovery and Reinvestment Act to improve access to broadband Internet service.

# Wired Space



Typical North American utility pole, showing hardware for a residential 240/120 V split-phase service drop:

(A,B,C) 3-phase primary distribution wires,  
(D) Neutral wire,  
(E) Fuse cutout,  
(F) Lightning arrester,  
(G) Single phase distribution transformer,  
(H) ground wire to transformer case,  
(J) "triplex" service drop cable carries secondary current to customer,  
(K) telephone and cable television cables

**RED Arrow** indicates Cable TV specific drop

# KEY TERMS

- **Broadband:** FCC & ConnectME define as 25Mbps down/3Mbps up. The FCC provides a specific capacity - which changes over time.
- **Broadband:** Intended to define a specific “Capacity” or the ability to send a defined amount of information over the Internet within one second. “Speed” (High-Speed) is often used/confused with the word “Capacity.”
- **Last mile:** Not a distance reference but refers to the final leg of a network delivery.
- **Capacity:** How much information a connection can/does transfer – defined in Mbps.
- **High-Speed:** General term implying “fast” or a high capacity Internet connection. Anything above Dial-up is fast 😊.
- **Bandwidth (Computing):** Bandwidth is the data speed supported by a network connection.
- **Bandwidth (Signal Processing):** Measure of the width of a range of frequencies, measured in hz.
- **Megabyte (MB):** MB is a multiple of the unit byte and is one million bytes of information.
- **Megabit per second (Mbps):** Unit of measure. Mb is 1/8<sup>th</sup> of a Megabyte.. MB and Mb are NOT interchangeable.

# KEY TERMS

- **Digital Subscriber Line (DSL):** Internet “medium” using regular telephone lines & special equipment. Not all phone lines have DSL. The medium has major limitations due to age, size and resistance. It’s copper!
- **Cable:** Copper wires form the structure and the key limitation is that RF passes over the copper medium and is subject to signal loss over distance. It’s copper too! This is Spectrum, Comcast & COX.
- **Fiber (Fiber Optics):** Fiber Internet uses light as the medium for the transmission of information and has virtually no distance limits.
  - Capacity limit... unknown.
- **WIFI:** Wi-Fi or WiFi is a technology for wireless with devices based on the IEEE 802.11 standards. Range is typically very short. Within a house - approximately 50 feet.



# THE END (For now....)

- **Cable:** *Charter* Communications owns *Spectrum*, an ISP that incorporates businesses such as the old *Time Warner Cable*.
- **DSL & Business Fiber:** Consolidated Communications Inc. (CCI)
  - With caveats....
- *Overbuilding* – It is getting attention!  
<https://www.multichannel.com/news/overbuilding-gets-rural-accent-at-hill-hearing>

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# "BROADBAND" SUMMARY

## BLUE HILL PENINSULA

SERVICES	Broadband Standard (Mbps) Down/Up			Medium	Wired	Wireless	Satellite	Future Growth (1)	Current Availability (2)	Local Vendors - Today (4)
	4-1	25-3	25-3							
	OLD	NEW	Connect Maine							
Dial-Up	No	No	No	Copper	X			NONE	Yes - Limited for Mac	Net Zero/Earthlink - \$
DSL CCI & others	No	No	No	Copper	X			NONE	Limited Area	CCI - \$\$
Wi-Fi Premium Choice	No	No	No	Air		X		NONE	Limited Area	<i>Removed from Blue Hill Mtn.</i> Premium Choice - \$\$\$
Satellite HughesNet/Exede...	Yes	Yes	Yes	Air		X	X	Unlimited NEW	Yes	<i>HughesNet Gen 5 Satellite</i> Exede/HughesNet- \$\$\$\$
Cable Spectrum	Yes	Yes	Yes	Copper	X			Limited	Limited Area	Spectrum - \$\$\$
4G LTE (& ADV) Wireless Cellular Verizon/AT&T/US Cell.	Yes	No	No	Air		X		Unlimited 4G LTE-A/ 5G	Limitations	<i>Varying Service Levels</i> US Cellular/Verizon/AT&T - \$\$\$\$
4G LTE-Adv. Red Zone Wireless	Yes	Yes	Yes	Air		X		Unlimited X	Limited Area	<i>Part of Brooksville Only</i> Red Zone Wireless (3) - \$\$
Optical Fiber Consolidated/Others	Yes	Yes	Yes	Fiber	X			Unlimited X	Restricted & Limited area	CCI ( <i>Business Only</i> ) - \$\$\$\$\$ Others - \$\$\$ Varies

**NOTES/Clarification** 1. Technology and affordability

2. Limited based on advertising, true availability, and in some cases technological limitations

3. New vendor in Maine - All Information based on Advertising, News Reports and Personal Conversation

4. Dollar Symbols (\$) represent cost point for similar service (incl. setup, etc.) – or as close to it as possible