# LHTC BROADBAND BROADBAND INTERNET SERVICE DISCLOSURES

Consistent with FCC regulations, we provide this information about our broadband Internet access services. Our broadband Internet access services include our "High Speed Internet" service offered through Wireline Fiber-to-the-Home ("FTTH") technology. We provide our High-Speed Internet services through the network that we own and manage.

We welcome questions or comments about the information contained in these disclosures. You may contact us at:

Laurel Highlands Area	South Canaan Area	Yukon Area
LHTC Broadband - Stahlstown	LHTC Broadband - South Canaan	LHTC Broadband - Yukon
4157 Main Street	2175 Easton Turnpike	419 Huntingdon Road
PO Box 168	South Canaan, PA 18459	Yukon, PA 15698
Stahlstown, PA 15687 724-593-2411	570-937-4114	724-722-3131
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# NETWORK PRACTICES

**General description**. We provide a variety of High Speed Internet service offerings to our residential and business customers. We provide the service over our broadband network and through third party fiber optic lines connecting to the Internet. We monitor our network and traffic patterns and make changes we deem necessary to manage and improve overall network performance. We use reasonable nondiscriminatory network management practices to improve overall network performance to ensure a high-quality online experience for all users. Our network management practices do not target any specific content, application, service, or device. As network management issues arise and as technology develops, we may employ additional or new network management practices. We will update these disclosures as necessary.

**Related documents and disclosures. O**ur High-Speed Internet service is also described and governed by:

- LHTC Fiber Internet service description and prices, available at <u>http://www.lhtcbroadband.com</u>
- LHTC Acceptable Use Policy, available at <a href="http://www.lhtcbroadband.com">http://www.lhtcbroadband.com</a>
- LHTC Privacy Policy, available at <u>http://www.lhtcbroadband.com</u>

**Congestion management.** We describe in this section network management practices used to address congestion on our network.

## Congestion management practices used.

**Network monitoring.** We monitor our network for utilization trends. We receive regular reports showing changes in network traffic and congestion. We use this information to plan increases in bandwidth available, port additions, or additional connectivity to the Internet.

**Types of traffic affected.** Our congestion management practices do not target any specific content, application, service, or device.

**Purposes of congestion management practices.** Our broadband Internet network is a shared network. This means that our customers share upstream and downstream bandwidth. The goal of our congestion management practices is to enable better network availability and speeds for all users. Our congestion management practices serve to:

- Help us adapt and upgrade our network to maintain or improve network performance as demand for our broadband Internet access service increases.
- Help us adapt and upgrade our network to maintain or improve network performance as demand for higher bandwidth applications increases. Some examples of higher bandwidth applications are gaming, streaming movies, and streaming high definition video.

### Congestion management criteria.

**Network monitoring.** Our network monitoring provides data to help us plan upgrades to our network, equipment, technology, and connectivity to the Internet. As demand for our broadband Internet access service increases, and as demand for higher bandwidth applications increases, we monitor effects on network performance and plan upgrades as we deem necessary. We have not established specific criteria to govern our upgrade decisions.

**Effects on end user experience.** Because our High-Speed Internet network is a shared network, periods of high network demand may result in Internet traffic congestion. End users may experience reduced bandwidth or speed during these times.

**Typical frequency of congestion.** Congestion tends to occur during periods of peak demand for higher bandwidth applications. Generally, the frequency of congestion tends to increase during 7 pm - 11 pm, especially on Friday and Saturday nights.

**Application-specific Practices.** This section discloses any application-specific practices we use, if any.

**Management of specific protocols or protocol ports**. To protect the security of our network and our customers, we block known hostile ports.

Modification of protocol fields. None.

## Applications or classes of applications inhibited or favored. None.

**Device Attachment Rules.** This section addresses any limitations on attaching lawful devices to our network.

**General restrictions on types of devices to connect to network.** We place no general restrictions on lawful devices that a customer may connect our network, so long as the device is: (i) compatible with our network; and (ii) does not harm our network or other users. Our High-Speed Internet service works with most types of PCs and laptops including Macs, and other Internet compatible devices like game systems and Internet-enabled TVs. If a wireless router is connected to our High-Speed Internet service, wireless Internet compatible devices including computers, tablets, smartphones, and other devices can connect to our network. If a customer or potential customer believes they have an unusual configuration, our customer service department will help determine if there is a compatibility problem.

Certain equipment is required to connect to our network for High Speed Internet service.

**FTTH Equipment**. To use our High-Speed Internet service delivered via FTTH, we must install an Optical Network Terminal (OTN) at the customer's premises. The OTN then connects via a cable to a device called a Residential Gateway (RG). The customer connects a computer or other Internet enabled device to the RG through a Network Interface Card (NIC) for a wired connection or through a wireless antenna for a wireless device. A customer may obtain an RG from us or may use a compatible commercially available RG. If a customer has a question about RG compatibility, our customer service department will help

**Network and End User Security.** This section provides a general description of the practices we use to maintain security of our network.

#### Practices used to ensure end user security, including triggering conditions.

<u>Hostile port blocking:</u> We block known hostile ports to prevent unwanted files, browser hacking and virus attacks.

<u>Virus and Spam filtering</u>: We filter email and website traffic for virus activity and Spam using industry standard virus scanning and prevention techniques. Should an email message be found to contain a virus or other harmful content, the message will be deleted without notification given to either the sender or the intended recipient(s).

<u>Firewalls</u>: RGs obtained from us have firewalls enabled. The firewall provides some protection against persons or programs that attempt to gain access to your computers or other connected devices through the Internet.

## Practices used to ensure security of the network, including triggering conditions.

<u>Hostile port blocking:</u> We block known hostile ports to prevent unwanted files, browser hacking and virus attacks.

<u>Virus and Spam filtering:</u> We offer email and personal web site hosting. We filter email and website traffic for virus activity and Spam using industry standard virus scanning and prevention techniques.

# PERFORMANCE CHARACTERISTICS

**General Service Description.** Our High-Speed Internet service enables a customer to connect an Internet-enabled device through either a wired or wireless connection. Our High-Speed Internet service enables residential and commercial subscribers to access all lawful content, applications, and services of their choice available on the Internet.

**Service technology.** We deliver our High-Speed Internet service through FTTH technology. Our network is a shared network, which means that our customers share upstream and downstream bandwidth.

**Expected and actual speeds and latency.** We offer customers a variety High Speed Internet service levels. We provide a description of the expected maximum transfer speeds associated with each service level on our website, available at <u>http://www.lhtcbroadband.com</u>.

**Speed.** The speeds we identify for each High-Speed Internet service level are the maximum upload and download speeds that customers are likely to experience. We provision our customers' modems and engineer our network to deliver the speeds to which our customers subscribe. However, we do not guarantee that a customer will actually achieve those speeds at all times. A variety of factors can affect upload and download speeds, including customer equipment, network equipment, congestion in our network, congestion beyond our network, performance issues with an Internet application, content, or service, and more.

**Latency**. Latency is another measurement of Internet performance. Latency is the time delay in transmitting or receiving packets on a network. Latency is primarily a function of the distance between two points of transmission, but also can be affected by the quality of the network or networks used in transmission. Latency is typically measured in milliseconds, and generally has no significant impact on typical everyday Internet usage. As latency varies based on any number of factors, most importantly the distance between a customer's computer and the ultimate Internet destination (as well as the number and variety of networks your packets cross), it is not possible to provide customers with a single figure that will define latency as part of a user experience.

Actual speed and latency performance. Actual speed and latency may vary depending upon network conditions and other factors. Actual performance of our High-Speed Internet access service in most cases will conform to national wireline broadband

Internet speed and latency levels reported by the FCC.

**Fiber-to-the-Home.** The FCC has reported that customers of fiber-to-thehome based broadband Internet services receive mean download speeds that are within 114% of advertised speeds during non-peak hours, and 113.5% of advertised speeds during peak hours. In addition, the FCC has reported that these same customers experience average latency delays of 17 milliseconds, increasing by an average of 18 milliseconds during peak hours.

**Suitability of the Service for Real-time Applications.** Our High-Speed Internet service is suitable for typical real-time applications including messaging, voice applications, video chat applications, gaming, and Internet video. If users or developers have questions about particular real-time applications, please contact us through the contact information provided on page 1.

# SPECIALIZED SERVICES.

**Specialized services offered to end users**. We currently do not offer specialized services over our network, and may offer such services in the future.

**Effects of specialized services on availability and performance of broadband Internet access service.** Any specialized services we offer would have no effect on the availability and performance of our High-Speed Internet service.

## COMMERCIAL TERMS

**Prices**. Monthly prices for our High-Speed Internet service are available at: <u>http://www.lhtcbroadband.com</u>

Usage-based fees. None.

Fees for early termination. None.

**Fees for additional network services.** Fees for certain additional network services are available at <u>http://www.lhtcbroadband.com</u>

See FCC's Office of Engineering and Technology and Consumer Affairs Bureau, *Measuring Broadband*, *A Report on Consumer Wireline Broadband Performance* in the U.S., OET CGB DOC-308828A1, pp. 4-6 (Aug. 2, 2011) (available at: http://transition.fcc.gov/cgb/measuringbroadbandreport/Measuring\_U.S. -\_Main\_Report\_Full.pdf).

**Privacy Policies.** We do not disclose High Speed Internet service customer or use information to third parties except: (i) as necessary to provide our High-Speed Internet service and to manage our network; or (ii) in response to law enforcement requests, court order, or as otherwise required or authorized by law.

Inspection of network traffic. We routinely monitor network and traffic patterns.

<u>Virus and Spam filtering:</u> We filter email and website traffic for virus activity and Spam using industry standard virus scanning and prevention techniques. Should an email message be found to contain a virus or other harmful content, the message will be deleted without notification given to either the sender or the intended recipient(s).

**Storage of network traffic information.** Dynamic Host Configuration Protocol (DHCP) information is a code included in all network traffic that associates that traffic with a particular modem sending or receiving the traffic. We store DHCP information for at least six months.

**Provision of network traffic information to third parties.** We do not disclose High Speed Internet service customer or use information to third parties except: (i) as necessary to provide our High-Speed Internet service and to manage our network; or (ii) in response to law enforcement requests, court order, or as otherwise required by law.

**Use of network traffic information for non-network management purposes.** We do not disclose High Speed Internet service customer or use information to third parties except: (i) as necessary to provide our High-Speed Internet service and to manage our network; or (ii) in response to law enforcement requests, court order, or as otherwise required by law.

**Redress Options.** End users or edge providers with complaints or questions relating to these disclosures should contact us through the contact information provided on page 1.

**Practices for resolving end-user and edge provider complaints and questions.** We will endeavor to answer questions promptly via email or voice. For complaints, we will provide an initial response in writing within 15 business days of receipt. We will attempt to resolve complaints informally, escalating the matter to senior management if needed.