

# Broadband Glossary



## **Bandwidth**

A data transmission rate; the maximum amount of information that can be transmitted along a data circuit.

## **Broadband Internet Access**

Often shortened to just "broadband" - a generic term for fast Internet access. This high-speed Internet is an 'always-on' service connection allowing large amounts of information to be conveyed quickly, such as data, graphics files or video. Broadband networks are especially useful in the Networked World, as they can carry many signals at once, resulting in faster data transmission.

In 2010, the Federal Communications Commission (FCC) defined "Basic Broadband" as data transmission speeds of at least 4 megabits per second (Mbps), or 4,000,000 bits per second, downstream (from the Internet to the user's computer) and 1 Mbit/s upstream (from the user's computer to the Internet). The trend is to raise the threshold of the broadband definition as the marketplace rolls out faster services. ("*Sixth Broadband Deployment Report*". FCC: [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2010/db0720/FCC-10-129A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0720/FCC-10-129A1.pdf))

Broadband penetration is considered a key economic indicator.

## **Broadband Council**

Since large areas of West Virginia are without broadband Internet access or without adequate broadband Internet access speeds, lawmakers approved a bill creating the Broadband Deployment Council. This council has the authority to enter into partnerships with private companies to provide broadband services to those areas that currently don't have them. The broadband council operates under the existing West Virginia Infrastructure and Jobs Development Council and is made up of representatives from government, telecommunications companies and the public.

## **BTOP – Broadband Technology Opportunities**

A NITA program designed to expand broadband access and adoption in communities across America. NTIA is providing grants to fund comprehensive broadband infrastructure projects, public computer centers and sustainable broadband adoption projects via its Broadband Technology Opportunities Program (BTOP).

Related Link: <http://www2.ntia.doc.gov/>

## **Citynet**

Citynet is a competitive local exchange carrier, a CLEC that is a leading telecommunications carrier located, owned and operated in West Virginia. Citynet is known for its technologically advanced IP (Internet Protocol) based service offerings and for enabling broadband services in underserved markets.

## **Competitive Local Exchange Carrier (CLEC)**

A telecommunications provider company (sometimes called a "carrier") that competes with already established carriers; generally the incumbent local exchange carrier (ILEC).

# Broadband Glossary



## Digital Economy

The rise of business' reliance on transactions through Internet and Web technologies, which include advanced services in the fields of: virtual home office, medical diagnosis and treatment, on-demand video, video conferencing, distance learning, training, next-generation telecommunication integration, advanced communication services (VoIP), and tens of thousands of industry specific enablement technologies that require high-capacity broadband services and cloud computing.

## FCC

The Federal Communications Commission (FCC) is an independent United States government agency. The FCC was established by the Communications Act of 1934 and is charged with regulating interstate and international communications by radio, television, wire, satellite and cable. The FCC's jurisdiction covers the 50 states, the District of Columbia, and U.S. possessions.

Related link: <http://www.fcc.gov/>

## Fiber

Fiber refers to fiber optic cables that contain glass threads (fibers) that provide ultra-high broadband capacities. A single fiber strand has the potential to transmit many billions of bits per second while legacy copper based solutions are limited to 45 million bits per second.

## Frontier

Frontier is a publicly traded cooperation and by virtue of its purchase of Verizon's legacy land-line businesses is now the dominant incumbent local exchange carrier (ILEC) in West Virginia. As of October 1, 2010 Frontier paid an over 9% dividend to its stockholders.

## Incumbent Local Exchange Carrier (ILEC)

An ILEC, short for incumbent local exchange carrier, is a local telephone company in the United States that was in existence at the time of the breakup of AT&T into the Regional Bell Operating Companies (RBOCs), also known as the "Baby Bells." The ILEC is the former Bell System or Independent Telephone Company responsible for providing local telephone exchange services in a specified geographic area. ILECs compete with Competitive Local Exchange Carriers (CLEC). ILEC is often used just to mean a telephone provider.

## Infrastructure

The basic physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function. The term typically refers to the technical structures that support a society, such as roads, water supply, sewers, power grids, telecommunications, and so forth.

## Internet Backbone

The principal data routes between large, strategically interconnected networks and core routers in the Internet. These data routes are hosted by commercial, government, academic and other high-capacity network centers, the Internet exchange points and network access points that interchange Internet traffic between the countries, continents and across the oceans of the world.

# Broadband Glossary



## **Kelley Goes**

Cabinet Secretary for the West Virginia Department of Commerce and has been with that department since June 2006; previously serving as deputy secretary and general counsel. Goes was appointed to her current position by Governor Joe Manchin in January 2007. She is responsible for the leadership and oversight of the agencies within the West Virginia Department of Commerce: Development Office, Division of Forestry, Division of Labor, Division of Natural Resources, Division of Tourism, Geological and Economic Survey, Office of Miners' Health, Safety and Training, and Workforce West Virginia.

## **Last Mile**

The final leg of delivering connectivity from a communications provider to a customer. The actual distance of this final leg may be considerably more than a mile, especially in rural areas. It is typically seen as an expensive challenge because installing wires and cables is a considerable physical undertaking. Because the last mile of a network to the end user is also the first mile from the user to the world, the term "*first mile*" is sometimes used.

## **Middle Mile**

Middle Mile refers to the communications infrastructure that connects individual communities, towns or cities (Last Mile service markets) with other often-larger service markets. Carriers either own their own Middle Mile facilities or purchase/lease these services from the underlying owner of such facilities. Middle Mile systems in practice resemble interstate and intrastate highway systems whereby larger markets (Tier 1 Markets) are connected to medium sized markets (Tier 2 Markets), and these Tier 2 Markets are connected to yet smaller markets (Tier 3 Markets), and so on.

The major barrier preventing affordable high-capacity broadband solutions to rural areas of United States remains the lack of available Middle Mile systems capable of providing this connectivity. These rural areas remain void of private industry investment because they cannot support the economies of scale necessary (the ROI) to justify the construction of these critically needed assets.

The NTIA, under its BTOP program, recognizes that open access Middle Mile systems are critical to expanding broadband enablement into these areas and the associated economic barriers limiting expansion by the private sector. In Round 2 of the BTOP funding program the NTIA shifted the majority of its focus on solving this challenge by focusing on Middle Mile solutions.

## **Monopoly**

A market in which there are many buyers but only one seller.

## **MPLS:**

Multiprotocol Label Switching refers to routing techniques that enhance the flow of standard TCP/IP routing protocols. By tagging packets with labels Internet routers can more efficiently deal with the routing of traffic over standard measures but the technique requires significantly more management and resources to accomplish the desired effects. MPLS is also a marketing term meant to impart some type of advanced routing. In reality, MPLS techniques have had mixed results at best within the telecommunications industry.

## **NOFA – Notice of Availability of Funds**

# Broadband Glossary



## **NTIA - National Telecommunications and Information Administration**

An agency in the U.S. Department of Commerce that serves as the executive branch agency principally responsible for advising the President on telecommunications and information policies.

Related link: <http://www.ntia.doc.gov/>

## **Open Access**

Permitting the physical infrastructure of telecommunications infrastructure available to businesses other than the owners, for a fee on a non-discriminatory basis.

Open Access prevents monopoly control of infrastructure and the high fees and poor service associated with monopolies. Open Access to telecommunications infrastructure is a proposed solution to the Middle Mile problem in terms of Internet connectivity.

## **RATB – Recovery Accountability and Transparency Board**

The Recovery Accountability and Transparency Board was created by the American Recovery and Reinvestment Act of 2009 with two goals:

- To provide transparency of Recovery-related funds
- To prevent and detect fraud, waste, and mismanagement

The Mission Statement of the RATB is “to promote accountability by coordinating and conducting oversight of Recovery funds to prevent fraud, waste, and abuse and to foster transparency on Recovery spending by providing the public with accurate, user-friendly information.”

Related link: <http://www.recovery.gov/About/board/Pages/TheBoard.aspx>

## **Sole Source**

A *non-competitive* purchase or procurement process accomplished after soliciting and negotiating with *only one source*, so-called *sole source*, thus limiting Full and Open Competition (FOC).

**T1 Line:** A T1 line can carry 1.544 million bits per second (1.544 Mbps) -- roughly 60 times more data than a normal residential modem. Sometimes referred to as a DS1.

**T3 Line:** A network backbone connection equivalent to 28 T1 lines and can carry 45 million bits per second (45 Mbps). Sometimes referred to as a DS3.