The Ins and Outs of High Speed Internet Access

High Speed Internet access for both consumers and commercial customers alike has been all about speed. Today, even though speed is a consideration when selecting a provider, it is not all you need to know when selecting these services for your business.

Getting through the "hype" is the hardest part and understanding the true value of a service takes digging into more than just the top download speed.

What is High Speed Internet?

High Speed Internet is a term used to describe a service that uses a wide range of frequencies that collectively are called bandwidth. The amount of bandwidth available determines how fast data can be either downloaded or uploaded through this pipeline. High Speed Internet services like Cable and DSL are capable of carrying larger amounts of data because they handle a much broader range (band) of frequencies.

Download vs. Upload

Download Speed is a term used to describe how quickly your computer is able to receive (download) data from the Internet. Download speed is a general benchmark of an Internet service and where most of the hype has been concentrated. Most access service providers compete in terms of offering a faster download speed (megabits (Mb) per second). Theoretically the larger the download speed, the faster you will be able to receive files from the Internet.

Upload Speed is the term used to describe the speed your computer is able to send (upload) the information via the Internet, and it is a very important component of your connection to the Internet. Whenever you log on to a web page or send a password to log on to your email account, you are uploading. For consumers, uploading may be less of a concern compared to downloading, yet for most businesses today upload speeds are a significant concern

Note... 1 Mb is not 1 megabyte (MB). 1 Mb is 128 kilobytes (kB) which means that there are approximately 8.5 Mb in 1 MB.

Asymmetrical vs. Symmetrical

Asymmetrical (Asynchronous) Bandwidth provides a higher download speed than upload speed. Access providers do this so that they can dedicate more bandwidth downstream for faster downloads. This is true for almost all of the home services where downloading data has been seen as more important than uploading data.

Symmetrical (Synchronous) Bandwidth provides the same upload speed as download speed. In most cases, this results in a lower overall download speed but the increased upload speed for most businesses is worth it. Symmetrical services are more favorable for business use, especially if your business regularly uploads large files or has a need for more frequent uploading.

DSL vs. Cable

In terms of peak performance under optimum conditions, cable services run faster than DSL. Cable technology is able to support roughly 30 Mbps of bandwidth while most forms of DSL struggle to reach 10 Mbps. Your local network speed, the number of end-users you have on your network, the speed of the PCs they use, the types of files they are uploading or downloading, and the overall level of traffic on the Internet itself can all adversely affect speed. When all of these are factored-in, cable's theoretical speed advantage weakens or disappears.

Cable is not as predictable as DSL, and cable's speed and performance may fluctuate during a typical business day. This is because cable bandwidth is shared by you and all the other Internet users in your area using the same service. Cable providers say this doesn't affect your connection speeds, but many businesses and consumers report that it does. DSL connections are never shared by other users in your area and as such don't suffer from this issue. Shared bandwidth is also considered to be less secure than having a dedicated connection, like DSL. Shared mediums are more susceptible to eavesdropping, denial of service attacks and service theft.

T1

The question for many is whether DSL or Cable services are fast, reliable and flexible enough to meet the needs of businesses today. The interest in Voice over Internet Protocol (VoIP) has increased the importance of having Internet access that is as robust and stable as possible. There is only one technology short of a fiber optic connection that has historically offered the most bandwidth flexibility and operational stability… the T1.

T1's are more secure than both cable or DSL and are almost always symmetrical. They can be provisioned to carry circuit switched voice, voice and data, VoIP or pure data that facilitates only your Internet access. They can be bonded to increase bandwidth and thereby increase speed. Often you can get service level agreements from T1 providers to ensure you have the highest level of up-time possible. In fact, the cost of subscribing to T1 services has come down considerably over the last few years, making them a much easier option for small business to consider.

There has never been a better time to put the Internet to work for your business. Make sure your choice is an informed one and go beyond the hype to get the most value for service investment. If you need help or just want to learn more… call TDS!