What is VDSL2?

VDSL2 is an acronym which stands for Very High Bit Rate Digital Subscriber Line Generation 2. This is based on of the original Very High Bit RateDigital Subscriber Line (VDSL) but runs on a different frequency (30 MHz) over 7 different bands to produce extremely high bandwidth capabilities. The service for VDSL2 is available in many different parts of the world and can be accessed through the copper wire phone lines that are already in place. This makes it extremely easy to get a fast connection which is available to businesses and organizations which need a line that could be split over a large network with more than normal strain.

The amazing thing is that the VDSL2 access is available over the same wires as plain old telephone service and lower speed DSL. This makes it very useful for companies which are in range to take advantage of the service when it is available in their location. The best thing for those companies which are in range to the telephone service provider center, or the stations which offer these VDSL2 services, is to ask the VDSL2 service providers if they can offer access to the network at the location. They will usually send out a technician to test out the phone lines and make sure that they work well enough without significant degrading.

Services Which Use VDSL2

There is a wide range of services which can benefit from having access to VDSL2 networks. These specialized networks can easily make it possible for these services to have a fast and active connection whenever they need it. The following are known VDSL2 beneficiary technologies:

HDTV Television Service – Since HDTV must be transmitted in a digital format, it is often offered through a cable connection. The best and fastest commercially available option is through VDSL2 which would offer flawless transmission of HDTV signals. This is one of the entertainment services which benefits the most through access to such a high bandwidth connection.

Telephone Service – Traditional telephone service can also be routed through the extremely fast connection offered through VDSL2. This is not a perfect technology and will only sound higher quality if the other number is routed through a fast connection as well. This can be integrated into massive call centers where the phone lines go through the VDSL2 service connection.

Voice over Internet Protocol – This is another popular option which is available through VDSL2 with much better sound during calls. The instant connection to both digital lines and traditional phone lines offers the highest quality sound when using VDSL2 services. The results with this option will be highly variable and depend on the quality of the connection of the party that is being called/is calling through the VoIP connection.

Available Speeds with VDSL2

Since VDSL2 is highly dependent on the distance between the customer and the service provider, it should be possible to get fast speeds even when out of maximum optimum range. The speeds which can be expected when within the maximum bandwidth range (within 300 meters) can exceed well over 100 Mbit/s in both directions. The normal connections which can be expected when out of this distance are:

100 Mbit/s Upstream – Although this speed is not the maximum available with VDSL2, it is a great average for those just outside the maximum range. There is little more that can be expected when outside the limits for the VDSL in terms of upstream connections.

100 Mbit/s Downstream – The same with upstream, but it will more than likely degrade at the same pace as well. Taking advantage of closer locations will provide better results with VDSL2 connections. The further the distance from the providers, the lower the performance, due to the loop attenuation increase. This makes speeds degrade down to VDSL speed and lower, the further the distance ends up being.

Advantages to using VDSL2

Since VDSL2 is a great option for high speed connections, it comes with several advantages when it is used for average high traffic usage:

VoIP Services – The services which are offered for VoIP connectivity will always work extremely well over a VDSL2 line. The connection is not difficult to set up and

multiple lines can be set up on the same connection. This is perfect for businesses which need several VoIP connections to reduce phone lines.

Fast Continuous Connection – The fast continuous connection that is provided with nearly equal upload and downloads speeds is perfect for conferencing and streaming data between locations. The speed helps with connections to servers that are offsite as well.

Server Access – Hosting a server within the premises is also possible and can be done over the VDSL2 connection. Since this connection can remain on all the time, it makes a perfect option for companies and organizations which want to host their own websites or a private server which can be accessed by employees or officials.

Disadvantages of using VDSL2

VDSL2 is an aging technology, it does have some disadvantages for companies/organizations which need much more than VDSL can handle such as:

Inability to Handle Thousands of Connections – Since the connections to a server which may be available on site may increase with popularity or necessity, the speed of the connection drops substantially as it is shared with so many connections. A faster Internet technology is required to really get the higher speeds that are required for several more connections than are possible through VDSL2.

Distance from Service Provider – Since distance from the provider plays a key role in speeds accessible, it may not be as beneficial to choose VDSL2 if you are outside the range that is commonly recommended for the maximum speeds. There are several distances which can output the necessary speeds for home use but they may not be suitable for business or commercial applications if they are too far from the service access point which is recommended. Asking a technician to come to the location to test the connection and get the speeds available is always beneficial in making the decision to use VDSL2.

Source: http://www.tech-faq.com/vdsl2.html