

One speed, two speed, all speed, no speed: DSL Internet and its mutations

Digital Subscriber Line (DSL) Internet is a form of Internet commonly used today by taking advantage of existing telephone infrastructure lines and manipulating them so that a wire not only transmits voice, but also data. The technique has exploded in popularity and competes directly against cable Internet subscriptions. It is most popularly known by its ADSL version (the 'A' standing for 'Asymmetric') but in fact a customer seeking DSL services today has many more options. The difference between the various versions of DSL lies in speed and quality. Since the DSL technology is not flawless (unfortunately, as with many other inventions we come across), improvements are continuously made to overcome the frustrations and barriers that get in the way of connection's smooth flow. Thus, there are now approximately 13 DSL standards.

Getting in the way of a DSL connection can include the following:

A phone line made of bad quality copper. There may not be much you can do about this one.

An Internet Service Provider with bad service. Some are just better than others, and often you pay more to get more.

Remoteness of destination. If you, or your computer, lives in the middle of nowhere, expect that the quality of your DSL will eventually deteriorate as it huffs and puffs to make it to the finish line (i.e. your router).

A wireless connection that just isn't happenin'. Often the connection is blamed, when in fact it's the wireless router that's not sending signals fast enough, thus rendering your high-speed Internet useless.

Software, often the uninvited kind. This is usually not your fault, but you can help it by regularly cleaning your computer of stuff that you never meant to download, but got downloaded anyway because you got tricked into it by some hacker, and never found out. These programs are called 'Spyware' and eat your bandwidth speeds like a worm in your tummy.

In some of these instances it's possible to take reasonable action (for example, switching providers), whereas in others you'll just have to live with what you've got. What you can do is equip yourself with the right knowledge to know what you're buying when you chose a DSL service and what "speed" will really mean to you. So, when an Internet Service Provider (ISP) advertises such and such speeds for paying for their services, keep in mind the following:

Asymmetric Digital Subscriber Line (ADSL) is the most commonly offered service. The 'Asymmetric' part of the title means that speeds going one way are not equal to speeds going another way. In other words, downloading is always going to be faster than uploading. Downloading includes activities such as viewing Web sites, checking e-mail, streaming audio or video and basically anything where another server needs to send information to you. Uploading is a mirror activity of downloading and happens every time you send information to another computer. For example, sending an e-mail would be considered uploading. ADSL is a typical service offered to home-based users. Usually, when ISPs

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advertise their bandwidth speeds they leave out the 'small print' about the significantly slower upload rates. But in most cases, you should be able to find out both numbers.

Symmetric Digital Subscriber Line (SDSL) is a service where both download and upload speeds are equal in bandwidth. SDSL is gaining popularity in Europe, but at this point in North America it remains an expensive alternative to ADSL, despite the demand. A business would benefit greatly from SDSL when considering file sharing among computers in a network and using a File Transfer Protocol (FTP) to upload files to a server. When running one's own Web site, uploading speeds may be more critical than downloading speeds since the server's primary function would be consistently feed out data.

Fiber lines are for the really serious players that demand high speeds going both ways. In essence, paying for a personal fiber line means no one shares the connection that goes all the way from the ISP to your router – no one. The installation, not to mention subscription rates of a fiber line could cost thousands.

There are alternatives when SDSL or owning your own fiber is not an option within reach. Information Technology (IT) companies are able to get creative when they need to find a way to do more with less. When high costs are out of the question for its clients, some may offer the option of combining multiple ADSL lines together to achieve both a higher upload and download rate. Marketing principles tend to limit user upload speeds so that businesses that need the extra bandwidth will be willing to pay for it. In areas where monopolies rule, it may be hard to find competitive Internet service options, but it's not impossible. Keep your eye on the lookout.