



What are the differences between various types of internet connection?

With the growth of the internet, various types of internet connection have been made available to consumers. Below is a brief outline of the different types.

- **Dialup** is the slowest type of connection to the Internet. It runs over analog telephone lines, and its speed is limited by the quality of these lines, which were designed for low-quality voice calls, not data transmissions. Dialup relies on modems which max out at 57600 bps.
- **ISDN** is a digital connection over a conventional telephone line. These connections are not as common as they were because it has been supplanted by other types of DSL connection. ISDN offers speeds faster than dialup and is an "always on" connection.
- **DSL**, (digital subscriber line), sends signals on a higher frequency than voice signals over telephone lines. It is an "always on" connection and offers high speeds, but availability is affected by the distance from the telephone company's central office. DSL connections are point-to-point - they are not shared in a neighborhood. A DSL business has a dedicated connection to the telephone central office, which means If your neighbors are surfing, they will not slow you down. DSL comes in two versions:
 - **ADSL** - Asynchronous DSL means that uploading is slower than downloading.
 - **SDSL** - Synchronous DSL provides equally fast upstream/downstream bandwidth. SDSL is often the preference of businesses needing to send and receive large files.
- **Cable** uses television coaxial cable to connect to the Internet. Cable has the potential to offer very high speeds, but is limited because cable is shared in a neighborhood. If the aggregate bandwidth being used by customers exceeds the bandwidth of the physical cable connection in a neighborhood (i.e. lots of people use their internet connections or TVs) then slowdowns are observed.
- **Satellite** is also available in a more than one version:
 - **Modem-Satellite** - A modem is used to send upstream data requests, while a dish receives data from a satellite. This method is plagued by latency (or delays), as it takes a long time for a request to travel via dial-up to the web server in question, and for the response to arrive through the satellite system.
 - **Satellite two-way** - The satellite dish sends and receives data. This technology is more recent, but still suffers from latency problems, simply because satellites are a very long way away.
- **T1, T3 and higher** Corporations may use these types of connection for hosting web servers, serving office users, and other high volume uses. These lines are dedicated digital trunks, reliable and fast.

Hanson Information Systems, Inc.
2433 West White Oaks Drive, Springfield Illinois 62704
(217) 726-2400