Types of Internet Connections

What Is the Internet?

The Internet is an important part of life for all of us, regardless of our location. Being connected to the Internet opens endless possibilities to access almost any information and communicate with anyone in the world. The Internet provides written communication faster than postal mail, allows for purchases online without driving to the store, and dramatically increases the speed of information-gathering. The Internet has many interesting and fascinating things to discover. We can send messages to each other, and even talk to one another using cameras just like we were sitting in the same room.

You may still be asking yourself, "So what *is* the Internet?" It is the largest computer network in the world, and it connects billions of computers. The Internet is an integral part of society. It is the go-to place for finding information on an array of topics.

Types of Internet Connections

It is important to understand the different types of Internet connections. The type of Internet connection you can access depends on your location. When choosing an Internet service provider, consider speed, price, technical support, and ease of installation (Battersby & Farivar, 2004).

Dial-Up

The most basic type of Internet connection is called a dial-up connection. This connection is made through a modem that uses a telephone line to connect to the Internet. The modem must dial the telephone every time it wants to connect to the Internet, hence the name *dial-up* connection.

Dial-up is where Internet connections got started! It was the first widely used type of Internet connection. When you have a dial-up connection, you hear beeping and buzzing noises while the Internet connection is being established. Internet service using dial-up can be disrupted by someone picking up the landline in the home or someone trying to make an incoming call. Dial-up access is like a phone connection, except that the parties at the two ends are computer devices rather than people.

The cost of dial-up is usually less expensive, but it has much slower speeds. Dial-up can be considered acceptable for reading text-only documents and emails. If you are going to download images, it is best to consider another method of connecting to the Internet.

Dial-up Internet is available anywhere with landline phones. Also, users in remote and rural areas can typically get dial-up. However, users cannot talk on their landline and be connected online at the same time because of the telephone line connection. Dial-up does not deliver high-speed Internet. The wait time to load a single webpage can be several minutes.

Digital Subscriber Line (DSL)

DSL stands for digital subscriber line. If you are accustomed to using a dial-up connection, you will be amazed by the speed of a DSL connection. DSL uses the phone line to carry digital signals directly. With DSL, you are always connected to the Internet.

Phone companies developed a way to send a second signal down the phone lines and were able to do it at a higher frequency. DSL uses a phone network as opposed to a phone line; therefore, it doesn't tie up a landline. It was the first real step toward improving the transmission of data and voice. DSL is considered to be broadband Internet, which means it is high speed.

In order to get a DSL connection, you will need your telephone company to install the line. The closer you are to the main telephone switching station, the faster your connection speed will be.

DSL delivers high-speed Internet. Households can connect to the web and talk on their landline simultaneously. It is a sufficient connection for common uses such as web browsing and video streaming. The disadvantage of DSL is that it is only available at limited distances from the provider, so many homes do not have access. DSL also costs more than dial-up service.

Cable

Cable Internet uses a special cable, known as a coaxial cable, and a modem. Internet connection via cable does not rely on a phone line. Internet access over cable modem is delivered to homes by cable television lines. The cable used is the same as the cable that you may have for cable TV. Most cable companies provide you with the modem and a network card that must be installed on your computer. With cable Internet, the cable company becomes the Internet service provider.

Cable Internet does not rely on a phone line. You do not have to have cable television to use cable for Internet service. However, cable Internet is a shared connection, so if your neighbors are downloading large files at the same time you are or during peak use times, your Internet connection may be slower. Cable Internet connections cost more than dial-up service.

Wireless

Wireless Internet uses radio frequencies to connect to the Internet. It is an always-on connection, much like DSL, within an area that has coverage. The wireless connection can also be used on your cell phone. It is similar to satellite coverage, but instead of using a satellite to connect to the Internet, it uses cell phone towers.

Wireless is a convenient Internet service. Wireless service also provides coverage more easily when cell phone coverage exists. A disadvantage of wireless Internet is that it costs more than DSL or cable.

Satellite

Another way to connect to the Internet is through a satellite connection. Satellite Internet is good for people who live in areas where other Internet options aren't available. However, it is a more expensive option for Internet access. The satellite dish sends a signal to a larger, orbiting satellite that passes the Internet request down to the satellite hub of your Internet service provider. With satellite Internet, you are connecting a computer to the Internet with a modem and satellite dish.

Satellite Internet provides a way for remote and rural areas to obtain Internet access. A phone line is not needed because the satellite dish is connected to your computer and not your phone line. However, the weather will affect the signal path, so you should expect poor Internet quality during windy or rainy weather. It is a costly Internet connection. The speed is relatively slower than other connections.

Fiber Optic

With an Internet connection using fiber optic cables, data is delivered in light signals by way of small, flexible, glass wires. Fiber refers to the glass wires inside the larger, protective cable. Optic refers to the way the data is transferred through light signals.

A fiber optic Internet connection is very fast. Fast speeds allow you to
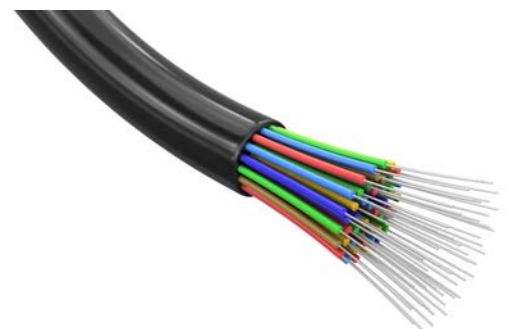
use multiple devices at home without your download or upload time being compromised. Fiber optic Internet does not rely on electricity, so there is little down time with your Internet connection. Fiber optic is not available in all areas, and it costs more than DSL.

What Internet Connection Is Best for Me?

There are several different ways to connect to the Internet, and there is something for everyone. If you are faced with the choice of more than one type of Internet service, you should evaluate your needs in order to make the best decision (Junion-Metz, 1996).

What you plan to do on the Internet determines what type and speed of Internet you need. Consider how you and your family will use the Internet. Will having Internet service be a way for you and your family to research topics more easily, allow family members to take online courses, or stream TV shows and movies and play online video games? General web surfing, email, and social media use don't require as much Internet speed as online gaming and video streaming/conferencing.

Think about reliability of the Internet connection you are looking for. You would like to have service with 100 percent reliability, but you should expect some downtime. If you work from home or run a business using your Internet connection, reliability may be the most important consideration.

Speed varies across the different Internet connections, but most Internet service providers try to minimize this issue and work to correct problems as they occur. Of course, we are all a bit impatient when it comes to web searching; therefore, Internet connection speed is important to consider when researching the best Internet connection.

Glossary

Bandwidth: The maximum amount of data that can be transmitted by an Internet provider over a certain period of time.

Broadband: High-speed Internet access that is always on and faster than the traditional dial-up access.

Dial-up: Internet connection established using a telephone line.

Landline: A phone that is connected to a phone system by wires.

Internet: A global network of billions of computers and other electronic devices.

Internet service provider: A company that connects you (the customer) to the Internet via dial-up, DSL, cable, wireless, satellite, or fiber.

Modem: A device that connects to the Internet. It serves as a bridge between your local network and the Internet.

Network card: A piece of computer hardware that allows computers to communicate over a network.

References

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