

## **Choosing An Internet Connection That Is Right For Your Business**

By Allan Cohen, CPA

Unless you've been on a deserted island with no link to the outside world for the past 5 years, it's no secret that the Internet has become a worldwide phenomenon. Many business consultants (me included) think that in order to be in a successful business today, your business must "wired."

As a business owner or a decision maker in a business, you must consider several factors before you make the commitment to be connected to the Internet:

- What is the purpose of putting the business on the Internet? Some are sending and receiving e-mail, research, business-to-business electronic commerce, business to consumer electronic commerce, running software applications, etc.
- Will individual PC's be connected or will an entire network be connected?
- Will your company have a "web presence" and where will the web site be hosted?
- What is your budget?
- Where is your business located?. Internet connectivity options vary depending on the geographic location of your company in relation to where POPs (Points of Presence) of ISP's (Internet Service Providers) are located.
- What is the level of Information Technology support within your company?

At the most basic level, one PC can connect to the Internet with an internal or external modem, a telephone jack and an account with an ISP. This account can be with an ISP that will just connect you to the Internet or a commercial online service such as America Online or CompuServe. The hardware and the ISP can determine the speed of your connection but generally this is limited to a maximum of 53Kbs (kilobytes per second). Costs for this type of connection range from approximately \$10.00 to \$25.00 per month for unlimited usage.

Connecting more than one PC at a time to the Internet can complicate the situation. One computer can act as an Internet Gateway providing access to other computers if networked to the gateway. This can be accomplished by using built in features of Windows 98 Second Edition/Windows 2000 or XP or through other software products specifically designed for this purpose such as Wingate. Hardware alternatives are also available to share Internet access such as the Intel In-Business Internet Station. These hardware products generally cost approximately \$400.00 and can connect small workgroups to the Internet; however, performance will be the same as a standard modem with a standard telephone connection.

Going up a level in connectivity options is ISDN (Integrated Services Digital Network). As the name implies, this is a digital connection, which means that the connection is less subject to interference and is more reliable. Speeds vary from 56Kbs to 128Kbs. Multiple PC's or a local area network can be attached to the ISDN line with the use of an ISDN router. A special type of modem is needed called an NT-1, which is often built into the router. Another advantage of ISDN is a much faster initial connection to the Internet over a dial up type connection. Since ISDN uses traditional copper telephone wire, it is widely available from the local telephone company. Prices vary widely from region to region and can range from \$30.00 to \$250.00 per month depending on usage and time of day. There usually is an installation charge from the local telephone company.

Another popular technology is cable modems. This device uses the same-shared cable delivery system that you receive television signals on. Generally, cable modems are only available for residential use and not for businesses unless you have a home-based business. Cable modems are extremely fast at 400-1200Kbs and are always connected to the Internet. Costs range from \$35.00 to \$60.00 per month depending on region of the country. Cable modems are not available in all areas even if you have cable television. Check with your cable company.

Another broadband technology is DSL (Digital Subscriber Line). This technology uses existing copper telephone wires and comes with a variety of implementation options. The type of DSL lines available depends on your area and local phone company. The installation must physically be located less than 18,000 feet from the local phone company's central office. Speeds vary from 128Kps to 1.56 Mps (a speed equivalent to a T-1 line). DSL lines can also be used in conjunction with a router in order to provide every workstation on a network with Internet access. Prices typically vary from \$49.95 to \$400.00 per month depending on the speed of the line and how many computers have access to the DSL connection. DSL vendors will often waive installation and equipment charges if you sign a contract for at least 1 year. With the abundant problems in the telecommunications industry, finding a stable provider may be a challenge.

For business or residences that cannot get access to high-speed broadband connectivity because of their location, a new option has recently been introduced. Satellite Internet connectivity is now an affordable reality. The initial cost is somewhat expensive with equipment costing about \$600.00 plus installation. The monthly costs run from \$90.00 up to \$250.00 depending on the number of users on your network. One drawback to satellite transmission is that the dish must have an unobstructed west/southwest view.

At the highest end of the Internet connectivity spectrum are digital leased lines. These types of connections can include Frame-Relay, Fractional and Full T-1 lines. A Full T-1 leased line has 24 channels that can be dedicated to provide Internet connectivity. Speeds range from 56K for an entry-level Frame-Relay line up to 1.54Mbps for a Full T-1. Leased lines are always used in conjunction with a router and can supply Internet access to hundreds of workstations on a local area network. Costs range from approximately \$300.00 to \$1,500.00 per month depending on the carrier. Additional monthly fees will

apply in the form of a flat fee called a “local loop charge” that the local phone company assesses. Typically the vendors will provide free installation and equipment in return for at least a 1-year contract.

With all these available options for Internet connectivity, there is no reason not to have your business connected to the Internet.

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