



Life in the information highway's fast lane

It used to be easy to get onto the Internet. After establishing an account with an access provider and connecting a modem to a telephone line, the brave new world of cyberspace was yours to explore.

Unfortunately, telephone lines were designed for voice communication and not to handle reams of data. As a result, the promise represented by the World Wide Web is in fact the disillusionment of the world wide wait. Fortunately, new options are appearing that provide economical access to the information highway's fast lane.

This column will look at 3 of these high-speed-access solutions: cable modems, asynchronous digital subscriber lines (ADSL) and satellite service.

Cable modems

With an information-transfer rate of 30 megabits per second (mbps, with a byte containing 8 bits), the cable modem is the fastest way to access the Internet. So how fast is it? For a user who wishes to download Microsoft Internet Explorer, a 15-megabyte file, using a 28 800 kbps modem, the transfer will take at least 70.65 minutes. Downloading the

same file using a cable modem will take only 4.3 seconds.

Unfortunately, cable modems pose problems. The device that connects computers to them, the network adapter card, can only transmit information at a theoretical maximum rate of 10 mbps, but users will be lucky to see a 5-mbps transfer rate at home. In short, even though data may be entering your home at a speedy 30 mbps, by the time they reach your computer they will have slowed to only 5 mbps. This means that downloading that 15-megabyte file will take about 26 seconds.

A second problem is availability. Currently, cable access is only offered in Montreal, the Greater Toronto Area, Ottawa and the Ontario cities of Kingston, Kitchener-Waterloo and Cambridge, as well as Calgary, Fort McMurray, Alta., Vancouver and Victoria. Availability will improve with time, but expansion is a slow and costly process.

Installation charges range from \$150 to \$500, and the monthly access charge is from \$50 to \$70. For more information, visit www.wave.ca.

Asynchronous digital subscriber lines

In response to the cable-modem threat, telephone companies are exploring new ways to transfer data faster via the existing telephone system. Sympatico's ADSL service has demonstrated a 2.2-mbps transfer rate while downloading and a 1.1-mbps transfer rate while uploading. ADSL costs \$69.95 per month, with a set-up charge of between \$80 and \$200. Its downside is limited availability. Currently, it is only offered in Ottawa, Hull and Quebec City. For more information, visit Sympatico's ADSL page at www.adsl.sympatico.ca.

As cable modems and ADSL face off over market share, they are both haunted by a common weakness: Canada's Internet backbone cannot support large numbers of consumers who are demanding data 1000 times faster than they are receiving them today. Consequently, it is unlikely that ADSL or cable modems will become widely available outside large urban centres, at least within the next few years. But for those living in rural areas, all is not lost.

Satellite service

DirecPC (www.direcpc.com) offers 200- or 400-kbps service via satellite. Although this is much slower than either ADSL or cable modems, it is available throughout most of Canada. The chief disadvantage is cost. In addition to a \$500 installation fee and a monthly access fee of \$50 to \$150, DirecPC is an asymmetric service and requires a connection via your normal Internet provider. Requests for information are sent from your computer to DirecPC's servers using a traditional telephone-based Internet account, and the requested information is sent back to you via a high-speed satellite network. Consequently, your service provider and DirecPC will bill you separately.

Given the costs involved, these relatively new services probably won't appeal to typical home-based Internet users, but they may be just what the doctor ordered for physicians in clinics or hospitals, for whom speed is of the essence. — This column was written by *Warren Lampitt*, director of information systems at Gretmar Communications (wlampitt@gretmar.com). In January his company's Internet site, WebDoctor, was 1 of 3 cited by the *Lancet* for providing noteworthy information for family physicians.

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