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# Strike Up the (Broad)Band Fast Web Access Speeding Toward You

FAST AND FURIOUS have come the promises—conduct a virtual deposition from your home office, cross-examine a remote witness while in court, participate in a video conference with your client or attend a motion hearing from any location—but the reality is something far less. One of the major reasons for not being able to conduct more proceedings “virtually” is a lack of “bandwidth” to carry this information.

However, that is changing rapidly. According to the Federal Trade Commission, 4.3 million or three percent of the nation’s households were connected to high-speed lines in the first half of 2000. However, it is now projected that more than 16 million businesses and homes will be connected to the Internet via a high-speed connection by the year 2004. The extra speed makes Web pages download seemingly instantly, and it enables subscribers to use streaming audio and video, virtual private networks, extranets and more.

Transmitting digital data requires a connector to a wire, or wireless pipeline, that will carry video and other data from one location to another. In most cases, this is done by wire, radio waves or space satellite. The key to transmitting a large amount of data or video is the size of the pipeline or bandwidth and the decoder devices or connectors on each end of the connection. The pipeline or bandwidth of the cabling or wireless transmission, along with the connectors, determines the speed at which data can be transmitted as well as whether video can be transmitted in an uninterrupted and viewable manner.

The time saved by having a high-speed connection can be significant in just download time. Here is a comparison of the

time necessary to download a 1-MB file using different types of channels:

### Time to Download a One-Megabyte File

(Estimates by Forrester Research, Inc.)

Channel Type	14,400 BPS (Telephone)	128,000 BPS (ISDN)	1 MBPS (Cable)
Time	9.7 minutes	66 seconds	8 seconds

Web access at high broadband speeds is still the province of cable, DSL, satellite and the new wireless broadband. Below are various methods and considerations for choosing a high-speed broadband provider. Also included is the required bandwidth to transmit different types of digital information. Other than cellular, satellite and WLL (wireless local loop), the following channels are all cable or “hardwire” connections.

We are in the midst of a broadband revolution that contains installation and usage problems. However, these challenges will give way to broadband use as accessible and common as today’s telephone service. Only then will we see promises kept for virtual depositions, court proceedings and other remote legal uses.

Locate broadband services near you, reviews and much more: [www.dslreports.com](http://www.dslreports.com)

## Digital Information Internet Channels

Channel Type	Bandwidth Size	Installation Cost	Monthly Charge	Modem Charge	Ease of Installation	Connectivity	Phone Lines	Bandwidth Required for Data Type
Cellular Phone (wireless)	19.2 KBPS	\$0-\$99	Monthly fee and/or per minute charge	\$0-\$50	Easy	Dial-up required	Wireless	Text-10 KBPS
POTS (Plain old telephone line)	33 KBPS-56 KBPS	\$20-\$50	\$15-\$25	\$15-\$60	Easy	Dial-up required	Extra phone line required	JPEG-images full screen-20 KBPS
ISDN (switched 56)	56 KBPS- 112 KBPS	\$50-\$200	\$50-\$100	\$50-\$100	Difficult-By communication company	Always on	No extra phone line required	
DSL (Digital Subscriber Lines)	150 KBPS-2 MBPS	Free-\$400	\$20-\$80	\$0-\$200	Difficult-By communication company	Always on	No extra phone line required	Video MPEG-1 video quality requires a 120 to 140 KBPS data stream.
Satellite (wireless)	1 MBPS+ *	\$200-\$400	\$60-\$70	\$200-\$400	Difficult-By satellite company	Dial-up generally required	Extra phone line may be required for uploading	
WLL (Wireless Local Loop)	1MPBS+	\$100-\$1,500 (includes receiver)	\$100	See installation cost	Difficult-By communication company	Always on	No extra phone line required	
T-1	1.54 MBPS	\$300-\$1,000	\$200-\$1,500	\$150-\$500	Difficult-By communication company	Always on	No extra phone line required	
Cable Television	150 KBPS-1 MBPS+	\$50-\$150	\$20-\$60	\$150-\$300	Medium-Generally by cable company	Always on	Generally no extra phone line required	

KBPS = Kilobits per second; 10 KBPS means that data is transmitted at 10,000 bits per second. MBPS = Million bits per second; 1 MBPS means that data is transmitted at 1 million bits per second. \*Generally download only at this speed or less. Upload by dial-up connection-33 KBPS-56KBPS.