

### Chapter 4 - The Internet and Telecommunications

#### Wireless Solutions

One solution to the telephone and cable-wiring problem is to go wireless. Wireless transmission of data, voice and video is one of the ultimate goals of the information revolution.

The future of wireless communication is very bright with many credible vendors beginning to lay the infrastructure for reasonable high-speed bandwidth into businesses and law firms. The use of wireless connection is a viable alternative to traditional hard-wired LAN's. Other fiber optic wireless technologies are entering the mainstream, which rival T-1, DSL or ISDN lines. Wireless computer connections will become commonplace, and will take "virtual" computing to a new level. It will do for computing what the cellular phone did for the traditional phone.

With wireless, we can truly work anywhere and anytime. Our productivity will rise as we will have instant wireless access to caselaw, courts, dockets, electronic filing and get instant updates on our cases. Wireless technology will continue to deliver at higher speeds and with smaller devices. Many buildings will offer wireless Internet connection for their workers and visitors that will dramatically impact work environments with the use of notebook computer and handheld PC's.

Wireless speeds can range from 19.2 KB to 11Mbps and higher. It depends upon radios, antennas, distance, power level of signal, etc. One wireless technology under development provides for a laser network that can transmit up to 1 Gbyte of data per second through the air. It does not require fiber optics or hard wire. Proxim ( [www.proxim.com](http://www.proxim.com) ).

The Associated Press noted in an April 15, 1998 announcement "The 3,000,000 million A

On a personal and business level, we will have wireless access to:

- E-mail messaging;
- Driving directions;
- Traffic and driving updates;
- Weather information;
- Telephone directory search;
- Stock quotes;
- Personal banking services;
- Personal or business reminders;

- Local and national business information;
- Court dockets;
- Caselaw;
- Case calendars;
- Brief banks.

A Wireless Application Protocol called WAP will drive many of these applications. It will deliver information in a Wireless Markup Language (WML) that is a trimmed down version of HTML. It fits the vital information onto a tiny phone. The WAP gateway translates the WAP request into HTML and relays it to the destination server on the Internet. The server sends its response back to the gateway, which extracts only the needed data, encodes it into WML, and sends it to the device, which decodes and displays the reply.

Wireless technology is already impacting location of cars, people, animals, computers, etc. Global Positioning Systems (GPS) will become commonplace as they become embedded in a watch or cell phone ([www.garmin.com](http://www.garmin.com) and [www.casio.com](http://www.casio.com)), parents can locate children with GPS patches in the skin ([www.digitalangel.net](http://www.digitalangel.net)), and McDonald's will be able to dial your cell phone when you walk by to let you know of the day's specials.

*Satellite.* Satellite system customers are required generally to invest in the antenna, receiver, ISA interface card and software. It may cost as much as \$500. Service charges may depend on usage that is measured in megabytes and not minutes. You may also need a separate dial-up account with an Internet Service Provider, since you cannot transmit data upstream to the satellite.

*LMDS - Local Multipoint Distribution System.* LMDS is a local wireless service that is being built on ground-based transceivers. A customer's antenna will point to a neighborhood transceiver that's mounted on a high pole or antenna. The transceiver will then communicate to a central office. The downstream data delivery may be at 25 to 50 MBPS, and the upstream at 5 MBPS.

*Two-way Wireless Messaging Service.* With a cell phone, handheld PC or pager, software, and a wireless connection you can send and receive e-mail, receive pages, fax a document, or receive a constant download of information. There is no logging on or connection. You simply turn on the wireless modem. Services are available through wireless messaging services and wireless carriers. Messages find you since there is no logging in.

