

## Special Edition: Wi-Fi

*Wireless networking is a popular topic when computer experts and business leaders get together. The ability to move laptop computers and remain connected to corporate networks and the Internet is a valuable business tool.*

*Would you like to know more about wireless networks (Wi-Fi)?*

*Call us, our number is listed below.*

*Damar Group, Ltd.  
PMB 451  
6030-M Marshalee Dr  
Elkridge, MD 21075  
410.290.7000  
1.888.290.6200  
603.925.1110 (fax)  
info@dgl.com  
dgl.com*

## *What's Wi-Fi?*

Wireless personal computing is spreading from building to building and changing the way people connect to one another in profound ways.

The technology, called Wi-Fi, is popping up all over: offices, homes, coffee shops, airports, and hotels. Each of these use inexpensive radio transmitters that are each capable of connecting several dozen computers wirelessly to the Web, file servers, and printers at speeds that rival cabled networks of just a few years ago

## *Wireless: not just for laptops anymore*

Desktop computer users want wireless technology so they're free to rearrange their workspace without fear of disconnecting critical network resources and the Internet. Wireless network cards are available for all desktop computers.

Now it's not just laptop owners who are free to move about. Wireless networks are great for connecting the bedrooms and downstairs den to a single high-speed Internet connection.

## *Double Your Wi-Fi Speed*

U.S. Robotics announced that its newest Wi-Fi products will be nearly twice as fast as comparable equipment.

This puts the pressure on the popular Linksys, NetGear, and Intel wireless networking products.

The new U.S. Robotics products create a wireless network that shuttles files or Internet access from one device to the next around 22Mb per second.

The equipment is compatible with the 30 million Wi-Fi (802.11b) networks in homes and offices, which have a maximum speed of about 11Mbps.

To create the speed boost, U.S. Robotics added a stronger radio and uses new technique called packet binary convolution code (PBCC), developed by Texas Instruments, to send data through the airwaves more efficiently.

The base station, called an access point, will sell for about \$200 and each PC card will sell for about \$100. When the cost of traditional wiring is factored in, Wi-Fi networks cost about the same to install as traditional local area networks.

## *Wi-Fi Security?*

Most products use spread spectrum technology. Vendors initially claimed it was difficult or impossible to de-spread or demodulate the signals. But they're wrong; it's actually easy to demodulate.

Spread spectrum technology uses an SSID (Service Set Identifier) as an identifier that's attached to each data packet passed over the WLAN.

Your network will respond only to the SSID assigned to it, other networks are ignored.

The problem is that SSIDs are sent in the clear, they're transmitted unencrypted. Software that's freely available on the Internet can pickup a network's SSID and allow an unauthorized user to send and receive data packets on your wireless network.

Many users think that just because their wireless network is rated for a maximum transmission range of 300 feet that they'll be safe, but actually all wireless access points can transmit up to 2,000 feet! The signal may be weak that far away, but it's still readable! It is possible to secure Wi-Fi networks, but you'll probably need a bit of expert advice to get it right.