ReadyNetGo .... News

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TIP OF THE MONTH

Is Wireless Right For You?

If you work at a business that has more than 2 computers, wired ethernet networks are the best option for connecting computers together and getting reliable and fast service. There are two reasons, however, when wireless options are applicable.

1) Structure: Within the building, you physically cannot run a wire because the wall cavities are inaccessible; i.e. the walls are made of plaster or concrete. In this situation, drilling through the walls would be more costly than the inconvenience of decreased performance while using wireless devices would entail.

2) Application: You need the ability to roam with your network device i.e. if you work in a warehouse, you may need to enter data into a handheld device and be able to move freely amongst boxes or on ladders. Having a wire attached would be a safety hazard and/or decrease your efficiency.

Another example would be if you worked in a doctor's office and needed to enter and receive data quickly without the inconvenience and hazard of trailing wires.

There are numerous examples where wireless devices are a smart idea. For security and reliability though, wired networks should be your first consideration.

Are You Ready to Break Free From Those Wires?

Computer technology has come a long way over the past 10-20 years and there are new inventions nearly every day. One of the latest technologies is wireless – from computers and handheld devices to cell phones with digital cameras, wireless technology is bringing ease and convenience into our lives. So let's go over the basics, including the different types of wireless connections and when and where wireless can be used.

There are currently three wireless standards:

1) **IEEE 802.11b** – also known as Wi-Fi; 11 mbps transfer capability – 2.4 GHz radio frequency
2) **IEEE 802.11a** – also known as Wi-Fi5; 54 mbps transfer capability; expensive; geared for corporate users – 5 GHz radio frequency
3) **IEEE 802.11g** – 54 mbps transfer capability; less expensive than the 802.11a counterpart; geared more for the consumer market. Abilities include streaming video from your PC to your TV – 2.4 GHz radio frequency

Each standard has advantages and disadvantages depending on what your needs are and how much you're willing to spend. The biggest advantage to wireless is the convenience - no wires to tether you to immovable objects. You can browse the web on your PDA, talk on your cell phone, and send an email from your laptop no matter where you are.

WWW (Websites Worth Watching)
1. www.ukpaganlinks.co.uk/404.htm - Hangman, anyone?
2. www.fda.gov/opacom/7alerts.html - Recalls and safety alerts updated every 60 days.
3. www.radio-locator.com - Going on a trip? Find a radio station you'll like even before you get there.
4. www.howstuffworks.com - Still an outstanding site for learning new information.

The major disadvantage to wireless networks is the decreased security features that wired networks have built-in. Since wireless networks are in the public domain, anyone (with ample computer knowledge) can gain access to the network you're on by figuring out the IP address. There are security measures (WEP – Wired Equivalent Privacy) that you can take to prevent this but many people don't employ them and they are still just a deterrent, not a fail safe barrier.

Another disadvantage is performance related. Since Wi-Fi devices operate over radio frequencies, you may encounter interferences which will decrease performance. The best connection will occur when the computer is located next to the wireless access point (WAP). Indoor ranges for wireless devices max out around 300 feet. Outdoor ranges will max out around 1000 feet.   Performance will drop if the range exceeds these values, there are obstacles between the device and the WAP, or several users are accessing information simultaneously.

Traditional 10/100 mbps Ethernet (wired) networks, on the other hand, have a range of 100 meters (or ~328 feet), do not experience a drop in performance with multiple users and have many more security features available. The biggest disadvantage to wired networks is installation in existing walls. That's why many homeowners are ecstatic about wireless.

A new standard is underway called UWB (Ultra Wide Band) which rivals Ethernet at 90 – 100 mbps. This high speed comes at a cost though; its short range capability will only travel about 10 meters (about 30 feet). Also in the pipeline is a short-range, high bandwidth wireless connection that will deliver transfer speeds of 480 mbps.

Applications

Wireless sounds great but you're probably wondering where you can use it, right? Here are some of the more intriguing uses for wireless connections:

1) Take your laptop outside on a warm sunny day -- send an email or two while soaking up the rays.

2) While out shopping, find the closest Chinese restaurant on your PDA without having to find a phone booth with a directory.

3) Use a digital media receiver to play music that's on the computer in your office on your TV in the living room. If you're watching TV and suddenly get an urge to check the files on your computer, don't worry about getting up; just use the remote and browse your computer files on your TV.

4)   Save a trip back to the grocery store: If your partner asks you to pick up a mango at the store and you can't tell the difference between a mango and a papaya, take a picture of both with your cell phone camera and let them tell you which one to buy.

Bottom Line?

With prices decreasing and speed increasing, wireless networks are a smart idea for home and small office users. The amount and types of wireless applications will only increase in the years to come so it's a good idea to become familiar with these options now. For medium to large businesses, wireless can be used for laptops, PDA's and cell phones, but wired networks are still the only reliable method for transferring information quickly among many computers and getting online securely.