# Wireless Networking

> Connecting your computers together using a wireless network is risky. Using a database type application like Windward System Five is much more demanding and intense than browsing web pages. If you're temporarily disconnected from a web page, no big deal. But if the database connection is disconnected, you could corrupt your data.

> Windward Software Inc. won't be responsible for the quality of a network.

We normally recommend that you connect the computers in your network to the server via a wired network connection. This means that all computers on your network have a network cable (CAT5 CAT5E CAT6 cable) connecting them to a router or switch. While Windward Software does support wireless devices such as scanners, data collectors, etc., We don't support wireless connectivity from any computer on your network. You MUST have all computers connected to a wired network.

That said, yes, you can still use your laptops with wireless. We do this all the time oursleves when we move around the office, or from home or even on the road. The trick is doing it the right way.

With **Terminal Server** software, you connect your laptop to the network with a wired or wireless connection, sign into the Terminal Server, and launch Windward System Five. The beauty of this method is that it runs extremely fast and doesn't require very much processor power from the laptop. You have a laptop or notebook because you need to be mobile. I assume this means you need to connect from home, on the road or from a hotel. With Terminal Services, you are only sending screen images, mouse clicks and keystrokes from the laptop and all the processing happens on the Terminal Server. Even Running the system from a hotel room over a dial up connection can run fairly fast.

We've also used the cellular 3G internet connection on a notebook. It allows us to connect to Windward System Five from anywhere there is cellular service and run the software at almost the same speed as in the office. This is incredible technology. We've used it in restaurants, airports and at tradeshows where there is no wireless internet service, but there is cellular service.

The issue we have is with running the actual software on your computer or notebook and making a wireless connection to the database. While it does work, **it is extremely slow in comparison to a wired connection**. If you look at the specifications of the wireless networks compared to wired networks, you'll notice about a 10 times speed benefit of using a wired network. If you were to run an Aged A/R report, for example, the system would need to loop through all the customers, and then loop through all the invoices for each customer and loop through all the payments for each invoice. There is a *LOT* of database activity. With wireless connection, the speed is slow and this would take a long time. Worse, if several people are using the wireless connection in this fashion, there would be a huge number of collisions and more problems would occur. And finally, if you were disconnected from the database connection because of timing issues, **you could cause corruption problems**. The Pervasive database and Windward System Five are very good at recovering from errors, but this is not always guaranteed. It's better to prevent errors in the first place.

And more importantly, you could not use this method out of the office, at home or on the road. Wireless is in the office only, within about 100 feet of your base station.

I just want to share one other experience we had several years ago. A customer in the furniture business had several computers connected together with a wired connection. They started to get corruption in their database and errors in their network. Not just in Windward, but other programs too. When one of our techs was onsite to try to figure it out, he was talking to me on the phone. He was doing a simple directory command from the DOS prompt. At times, it showed 150 files in the directory. Other times a random number from 40 to 80 files. As we talked, the phone was buzzing some of the time. Turned out, the only time we got all 150 files was when there was no buzzing on the phone. Our tech onsite then noticed that when there was a buzzing noise on the phone that there was a loud machine noise next door. He followed the noise and found a welder using a machine that was poorly tuned and it was causing stray electrical noise and radio waves that jumped into the cable and screwed up the computers. This was something we had no control over, was a wired connection and caused corruption. The wire was shielded to prevent picking up radio waves, but they came in anyways because it was so strong. A wireless device specifically picks up radio waves.

When it comes to wireless technology, there are several other factors. Think of all the stray electrical or radio interference. One of the most common ones today is wireless telephones. They use the same frequency as wireless computers. The telephone manufacturers often break some rules to get the best quality signal. That is, they boost the power to the max and use all the available channels instead of just one channel. At home, I had to change technology to get the phones and computers to work well with each other.

With a Windows Terminal Server, if you get interference, you might drop the connection, but the program and data are protected because only the screens and keystrokes are transmitted. When you reconnect, you can continue where you left off as if nothing happened.

Yes, you can and should make use of wireless laptops, but you should use them with a Terminal Server as it allows you a higher speed connection. Also this gives you the ability to access your network from outside of the office. Which is probably why you purchased a Notebook, Laptop or tablet in the first place.

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Last update: **2019/01/28 09:44 (5 years ago)**