

# **INTRODUCTION TO WIRELESS NETWORKING**

## **4 KEY QUESTIONS & ANSWERS**

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## **Introduction to Wireless Networking**

Since the announcement of our pioneering effort with wireless networking training and certification in Nigeria, a number of issues have cropped up as to what wireless networking is all about. Here is a brief introduction based on 4 frequently asked questions, arranged in Question and Answer format.

### **Q1. What is Wireless Networking?**

A. The term wireless networking refers to technology that enables two or more computers to communicate using standard network protocols, but without network cabling. Although any technology that does this could be called wireless networking, the term generally refers to wireless LANs (WLAN). A WLAN is a grouping of network components connected by electromagnetic (radio) waves instead of cables.

A wireless LAN basically consists of: the network backbone; end-user devices such as data collection units, handheld computers and laptops; wireless LAN access points; wireless cards; and software that will help you manage the network.

A single access point can support a small group of users and can function within a range of less than 100 to several hundred feet. Access points can connect WLAN to a wired LAN, allowing wireless computer access to LAN resources, such as file servers or existing Internet Connectivity.

### **Q2. What is the advantage of Wireless Networking?**

A. Wireless is not a technology to be adopted for its own sake. What does it bring to our daily tasks and to the balance sheet?

➡ Mobility - WLANs provide users with access to real-time information anywhere in their organization. Portability and Accessibility (anytime, anywhere access) is key. WLANs encourage the growth of “hot spots,” which are areas outside of the office (or home) that allow users access to the company network or

the Internet. Hot spots can be located in public places such as airports, restaurants, etc.

➤ **Reliability** - Fewer wires and connectors translates to fewer problems. The downtime due to cable faults in wired networks is eliminated.

➤ **Ease of Installation** - No expensive and time-consuming cable installations is required. No drilling or dropping cables through walls and ceilings. Wireless eliminates the time, expense and disruption associated with cable.

➤ **Affordability** – There are significant cost savings primarily as a result of lower cabling/installation costs. In addition, long-term costs are greatly reduced in environments such as large enterprise networks that require frequent moves and changes, as no recabling is involved.

➤ **Scalability** - Systems are easily configured and rearranged to accommodate a variety of office settings and number of users. Once in use, computers equipped with wireless network cards can be easily relocated.

➤ **Installation Flexibility** -Wireless can go where wire cannot go. You can use it in areas where you don't have the capability to run wire, i.e. where cabling options are strictly limited.

### **Q3. Who needs Wireless Networking?**

A. If you, your application or your organization requires to take advantage of the benefits of mobility, portability and accessibility of data, then you need to consider wireless networking. Here are typical areas that benefit from the use of wLANs:

- Corporate Information Systems – Networks can be installed, relocated without the constraints of wired networks. Users can do e-mail, file sharing, and web browsing, “anytime, anywhere”.
- Shops/Retail – Shops can maintain real-time pricing and inventory information wireless using wireless handheld devices.
- Education - Wireless communications in higher institutions reduces the cost and time required to cable campuses. Students and teachers can interact anywhere on campus.
- Warehousing – Workers in the warehouse can communicate and store data for inventory management while still on the warehouse floor.
- Medical/Hospitals - Hospital staff can use wireless handheld devices to access and update patient information, and improve quality of patient care.

#### **Q4. What does the future portend for WLANs?**

A. Increased use of laptop computers within the enterprise, and increase in worker mobility have fuelled the demand for wireless networks. Note that like any other technology, there are challenges associated with the use of WLANs? WLANs are not a “cure-all”. But with the maturing of industry standards and the deployment of lightweight wireless networking hardware across a broad market section, wireless technology has come of age.

The technology no doubt has witnessed increased acceptance in the last few years not only within the enterprise, but also within the home, public access, and embedded device markets. This is made possible not only by improvements in performance and manageability but also security and interoperability as well and the general decrease in price.

Purchases of wireless hardware reached \$2.2 billion in 2002 and are expected to top \$3.9 billion by 2006, according to research firm In-Stat/MDR. Units sold will skyrocket from 18 million to 75 million in 2006, which suggests that the cost of deploying wireless will continue to fall.

The rate of growth is the major difference between the networking market as a whole and the wireless LAN market. Due to the advantages mentioned earlier, growth in wireless LANs is faster than every other market sector.

I hope you have found this brief introduction useful.

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PS: Attend the Free Wireless seminars for more enlightenment on Wireless Networking. Spaces are limited to people who register. There is no fee to attend, so register here today:

<http://www.jidaw.com/wirelessseminar.html>

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