



Wireless Networks Will Likely Fail Unless Context, Coverage and Capacity Are Considered

AUSTIN, TX, November 1, 2005 – When companies implement wireless networks or expand deployments of existing networks, they must consider the three C’s – context, coverage and capacity – to ensure success.

While most wireless networks perform well enough for basic e-mail and web access, they are not sufficient for the challenges presented by large numbers of users, challenging environments like healthcare and retail or demanding, business-critical wireless applications such as voice over wireless (VoWi-Fi) and high volume financial transactions. As soon as these high bandwidth applications and users start accessing the network, disruptions and outages will likely occur unless the network has been planned for these conditions.

In order to properly set up a wireless network, planners must consider the following three issues:

- **Context** – Companies must take into account the context of the physical location where the network is being implemented. The physical characteristics of the site such as the composition of the walls, windows, stairwells, elevators and other factors all impact the performance of wireless signals by degrading them or potentially blocking them entirely.
- **Coverage** – This involves planning the network to ensure wireless signal is available throughout the facility to provide uninterrupted connectivity. It also plays a role in maintaining security by making certain the signal is not leaking to areas outside a designated space.
- **Capacity** – How many people will be accessing the network, where the users are located and what applications they will employ determine how much capacity is needed on the network and must be considered in the design phase; otherwise, problems such as packet loss, timeouts or connectivity outages will occur.

A variety of ways have been tested for planning a wireless network including “trial and error” placement which involves installing access points (APs) at designated intervals and adding new APs as problems arise. This method is costly, unpredictable and does not factor in any of the three C’s. Another commonly used method is a site survey in which APs are placed and measurements of the wireless signal are taken. Planners must remember site surveys are only as good as the collected data, and if your company requires coverage in a given area, the designer must take readings in that area. As a result, to ensure coverage a company must invest the time and money to measure their entire facility. More importantly, site surveys do not address the capacity requirements of the network.

Wireless Valley’s LANPlanner[®] software employs a predictive design approach which allows companies to consider the context of the environment and predict coverage and capacity before deploying any hardware resources. Wireless Valley’s software enables network planners to import a map of the facility, note the contents and construction materials, designate user regions and applications to be used and place equipment. The designer then interactively simulates how the wireless signals will propagate and fine-tunes the network design with “what if” analysis to determine optimum performance.

Keith Ebel has seen more than his share of failed wireless network implementations in his 22 years of work in the RF/microwave wireless industry. His Kansas City company, Proximity Wireless, www.proximitywireless.com, provides turnkey solutions for personal, local, wide and metro area wireless voice and data networks. "Many companies believe you can just install APs, turn them on and the network will work flawlessly, but that just isn't the case," Ebel commented. "Complex RF environments require careful design and deployment to work properly. Many companies contact Proximity after these implementations fail and we provide them a design based around Wireless Valley's software. While these clients have been very pleased with the quality of service delivered by the resulting network, the project ends up costing much more than if they had designed it properly from the outset. Bottom line, if you don't consider context, coverage and capacity in planning your network, you are asking for trouble."

To learn more about the three C's of wireless network design, download a more detailed whitepaper from http://www.wirelessvalley.com/network_world/index.asp

About Wireless Valley

Wireless Valley® Communications is a leading provider of innovative software for the efficient design, documentation, monitoring and management of wireless networks. Wireless Valley's software addresses application bandwidth and capacity planning requirements along with coverage needs to ensure cost-effective deployment and management of high-performance wireless networks. Enterprises, universities, multi-tenant office buildings, carriers and businesses worldwide look to Wireless Valley's software to easily plan, visualize, and manage any PCS, Cellular, 3G, WiFi/WLAN, Mesh, WiMax, RFID and ZigBee wireless network. Wireless Valley has developed a rich intellectual property portfolio with more than 100 U.S. and international patents pending and issued. For more information, visit www.wirelessvalley.com or call (512) 821-1560.

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Contact:
Claire Campbell-Seeger
Director, Corporate Communications
(512) 821-1560, ext. 130
claire@wirelessvalley.com
www.wirelessvalley.com