

THE AGENDA

BANISHING THE BAD SIGNAL

Reliable wireless coverage where you need it most from Spotwave Wireless



For most businesses, Wireless devices like cell phones and PDAs have had a tremendous impact due to their ability to empower the American mobile workforce, from sales people to C-level executives. Wireless technology has enabled these professionals to instantly communicate with their corporate headquarters anytime, anywhere. For those who do the majority of their work in a home office or small satellite office, Wireless technology has become indispensable.

Companies spend millions of dollars investing in Wireless technology to ensure efficiency and productivity from their employees, regardless of location. However, connectivity requires reliable Wireless coverage where these devices are used most – indoors. For years, remote or mobile workers have simply moved closer to the window or gone outside to get enough signal to carry on a conversation. Still, with growing dependence on cell phones

and Wireless data services, a weak signal can mean important missed calls and incomplete or slow data throughput. This impacts the efficiency and productivity gains the technology was put in place to ensure.

A perfect tool for an imperfect world

Although significant developments have been made to improve outdoor macro-level coverage – you don't travel far down any highway without seeing a Wireless tower – great coverage outside doesn't always mean great coverage inside. Building materials like concrete and tinted glass, or even the location of many small offices – in dense, urban markets, or in a fringe area of the macro network – can compromise indoor coverage.

We often hear the success stories about providing Wireless coverage to a major airport or casino – places where many subscribers are using their cell phones on a transient basis. However, it's important to consider how coverage is an issue in mid-sized and smaller buildings as well. Over 90 per cent of commercial buildings in the US alone are less than 50,000 square feet. Enterprises of all sizes are choosing to go Wireless because it offers them more mobility and convenience than traditional landline use. One of the major obstacles impeding Wireless use, as seen in larger public spaces, plagues smaller buildings as well - indoor coverage. Signals cannot penetrate many buildings, rendering Wireless voice and data communications difficult or impossible.

For the executives or mobile workers dependent on their Wireless devices, not having access to reliable communication from your office poses a significant challenge. Enterprises of all sizes must consider how coverage is provisioned as part of their Wireless strategy.

Stone, metal and glass: bad signal

Hutchens Construction is a prime example of a mid-sized company where poor indoor coverage posed a significant business challenge. The Cassville, Missouri company was located in a small office within an old building built early in the 20th



century. The building, made of thick, old wood with a metal roof and metal siding, was a dead zone. This situation particularly impacted the company president. Though he encouraged employees to reach him via cell phone, when in the office, he would routinely miss calls. Road crews were unable to get answers to questions and important business calls went immediately to voicemail. Once alerted he had voicemail, the president would have to go outside the building to access the missed call. Clearly, missing calls from employees, clients and vendors was a significant problem impacting day-to-day business operations.

Chicago's Central DuPage Hospital (CDH) faced a different type of Wireless coverage challenge. The second busiest surgical center in

Illinois wanted to implement an aggressive Wireless strategy that included supporting more than 800 PDAs and cell phones for their staff. The goal of the program was to allow physicians remote access to patient information both in and outside of the hospital, including real-time access to laboratory and radiology results, vital signs, medication updates and patient history.

However, for the phones and device applications to deliver these desired efficiencies, CDH needed to enhance their Wireless coverage inside the hospital. As with most buildings, the location and construction of the hospital prevented a good signal indoors, so an in-building Wireless solution was required. The hospital also needed to ensure that the solution would enable coverage in smaller areas, so it

THE AGENDA



wouldn't disrupt essential medical equipment.

A concise and compliant solution

There are varying solutions available to address indoor Wireless coverage, yet few target smaller areas. Complex solutions, such as distributed antenna systems (DAS), are designed to cover very large buildings like office towers or airports. This type of offering requires a complex design engineering process and does not scale well to smaller coverage areas, so it's not a practical option for those who require coverage in specific locations.

Some smaller solutions that claim to be suitable to boost coverage in a smaller area are also problematic because they are not approved by Wireless carriers. Carriers like Cingular, Verizon, Sprint and Alltel invest millions of dollars to maintain the integrity of their Wireless network – it's their most valuable asset. For this reason, Wireless customers are prohibited from using any product that could interfere with a carrier's licensed spectrum.

Installing a product that hasn't been carrier-endorsed means running the risk of disrupting Wireless signals, or having a carrier demand removal of a system they haven't approved. For carriers to widely address the problem of indoor coverage on this scale requires a solution that is intelligent and transparent to their networks and

that ensures network integrity without creating power or noise concerns.

Spotwave provides an in-building solution that was purpose built to address the carrier's need for network transparency and integrity, and the subscriber's need for simplicity and cost-effectiveness.

Organisations of all sizes, from mid-sized construction companies like Hutchens to larger hospitals like CDH want to ensure they have good Wireless coverage in specific areas – typically smaller than 100,000 square feet – guaranteeing they will be able to receive cell phone calls where and when they need them, without worrying about interfering with their Wireless network.

Working with providers to improve service

Hutchens contacted Alltel, their Wireless provider, to report their coverage issue. Alltel recommended using a simple in-building coverage system from Spotwave Wireless, which they approved for use with their Wireless network. Once the firm's safety director contacted Spotwave, a system was installed by Alltel three days later. Immediately, Hutchens employees – in particular, the firm's president – were able to use their cell phones in the head office. No more walking outdoors to check voicemail after a missed call.

Similarly, CDH contacted their Wireless provider, Sprint, to solve their indoor coverage problem, as they were nearing the target date for

rolling out their Wireless strategy. Sprint also engaged Spotwave Wireless to examine the hospital layout and prioritise the key areas that needed enhanced coverage. Spotwave systems were installed in key areas of the hospital, enabling reliable Wireless coverage at a fraction of the cost of alternatives. Once the installation was complete, the hospital was able to go live as the first medical facility to deliver real-time patient clinical data to a Wireless device over a Wireless network.

Both organisations were able to solve their problem efficiently and cost-effectively, with a system that was both easily installed and approved by their respective Wireless carriers. Increased Wireless coverage provided in the specific locations required ensured that the desirable business benefits of a Wireless strategy – namely, convenient, anywhere, anytime communication – were realised.

Ensuring cover for all

Wireless technology is clearly the future of doing business both in the United States and worldwide. To ensure the full business benefits are realised, indoor coverage is a key consideration for maximising a return on investment. For many organisations, this means finding a simple, affordable, quickly deployed coverage solution approved by their Wireless carrier. □

www.spotwave.com