

Tired of Cell Phone Dead Zones? Consider In-Building Wireless Systems!

By: Darlene Pope

Have you ever noticed that whenever you pull into a parking garage or step onto an elevator in a commercial office building, you typically lose your cell phone connection? Well, you're not alone: Studies show that 51 percent of wireless users experience dead spots on a regular basis when in commercial office buildings (Totum Research, July 2001).

The cellular industry is experiencing a high demand for wireless coverage everywhere that their customers go, including shopping centers, hotels, airports and office buildings. In fact, according to a USA

Today/CNN/Gallup poll, 18 percent of wireless subscribers already rely on their wireless devices as their primary form of communication – both for personal and business use. This increasing demand has created the need for special wireless equipment and antennae that can service limited coverage areas inside buildings. These systems, commonly referred to as “In-Building Wireless” systems, have recently been introduced to the commercial real estate industry. By installing a distributed antenna system (DAS) throughout the property, wireless signals can be transmitted to previously underserved areas – including parking garages and elevators. This technology will eliminate dropped signals or dead zones within buildings where the system is installed.

In order for the new In-Building Wireless programs to be successful, there are several key factors that have to come together. First, property owners have to recognize the tenant demand for wireless technologies and prepare their buildings to support these new wireless applications. Although the immediate need seems to be in supporting mobile cellular devices, such as cell phones, pagers and personal data assistants (PDAs), the building DAS systems are also designed to support wireless local area networks (LANs) and other wireless applications that may be introduced in the future.

Second, the cellular carriers have to be willing to invest the capital to maintain a DAS within a particular building. In order to realize a return on their investment, carriers evaluate the property and estimate

how much additional business they might pick up in cellular usage by installing such a system.

The carriers are typically looking for high traffic areas such as retail space, subway access or public garages – or perhaps a large tenant in the building who happens to be one of their corporate customers. In most cases, however, a single cellular carrier will not invest the money to install a DAS in a multi-tenant office building due to fact that only a portion of the tenants may subscribe to their cellular service.

To solve the problem of tenant demand not being met by individual carriers, there are several companies that install and manage “neutral host” DAS systems, where multiple cellular carriers can lease the right to transmit and receive signals over a common building infrastructure. This is an excellent solution for multi-tenant office buildings. Installation of a neutral host system typically requires a small amount of space for a main equipment room, riser access and the ability to install horizontal cabling and antennae. These “In-Building Service Providers” (IBSPs) include such companies as Azonic Networks, InnerWireless, Spectrasite and Tego Communications.

At this point in the evolution of In-Building Wireless systems, IBSPs and carriers are focusing on shopping centers, airports and large commercial office buildings – typically properties larger than 500,000 square feet. As the demand for coverage inside buildings increases, however, and as the carriers begin to recognize an increase in usage and revenue from those buildings, the installation of in-building systems should become more common. With more than 132 million current U.S. wireless subscribers, and consumers' increased expectation that their cell phones and pagers work inside, it will be very difficult for carriers and real estate owners to ignore that demand. ■



BOOKMARK IT!

BOMA International:
www.boma.org

CRE Partners:
www.crepartners.com

Azonic Networks:
www.azonicnetworks.com

InnerWireless:
www.innerwireless.net

Spectrasite:
www.spectrasite.com/web/home.asp

Tego Communications:
www.tegocommunications.com/web/noFlashHome.html

Facility Management Discussion Group:
www.fmforum.org



WHAT'S NEW AT WWW.BOMA.ORG?

BOMA Annual Convention and The Office Building Show®:
www.boma.org/convention/brochure/

Emergency Resource Center:
www.boma.org/emergency/

BOMAPAC:
www.boma.org/bomapac.htm

Darlene Pope is founder of CRE Partners, specializing in research, education and consulting for commercial real estate companies in matters of telecommunications and technology. She can be reached at (703) 444-5720.