

In-Building Wireless Market to Reach \$3.6 Billion

By Bruce Wilson

Since 2005, the United States has ranked as one of the leading adopters of mobile communications, with wireless subscribers surpassing landline subscribers. Consider these recent data points:

In April of 2009, Reach In Motion, the maker of the BlackBerry, shipped its 50 millionth phone. RIM shipped approximately 7.8 million devices in the fourth quarter and approximately 26 million devices during fiscal 2009. In July of 2009, Apple reported an install base of 45 million plus iPhone OS devices.

As a result of this wireless technology expansion and the proliferation of mobile wireless devices, ABI Research forecasts an annual In-Building Wireless (IBW) market growth of 20 percent, reaching more than \$3.6 billion by 2011.

What is IBW technology?

An IBW infrastructure enables the use of wireless devices, technologies, and applications within an enclosed structure. IBW solutions can be installed in nearly any infrastructure, including sports arenas and stadiums, hospitals, campus environments, airports, tunnels, high-rise buildings and standard office buildings. One of the most efficient, cost effective and proven IBW solutions is a Distributed Antenna System (DAS).

A DAS utilizes the wireless service provider signal from a local cell tower and propagates the signal indoors via an in-building repeater and antennas strategically located throughout the building. Proper IBW design optimizes the location of the DAS equipment based on the RF (radio frequency) properties of the signal, the structure of the building and the environment. A DAS network can be designed to support wireless service provider frequencies (cellular phones), public safety and emergency response requirements, and WLAN applications such as WiFi, asset tracking, RFID, emergency notification and building automation.

Why do we need in-building wireless?

Despite the massive transition from wired to wireless, many structures across the United States lack the technology to enable ubiquitous wireless communications.

With nearly 70% of all wireless calls made indoors, the demand for seamless connectivity is greater than ever. As more mobility is enabled and encouraged in our society and workplace (think of the hospital with the doctor on call and the patient's electronic medical records immediately available), the need to solve this issue grows daily.

The challenges are many, but simply put, the structures themselves may block or degrade signal coverage, leaving users with signal drops (such as dropped calls, applications that need to be rebooted, and data integrity lost), resulting in reduced productivity and customer dissatisfaction.

Deploying in-building wireless

Assessing, then partnering with the best system involves expertise and vendor knowledge that is not within the mainstream of most corporations. Proper selection of a knowledgeable and experienced IBW vendor can reduce capital expenses and ensure interoperability with primary technologies of 3G, 4G wireless, and 802.11 networks—not to mention the specialization and solutions required for tough RF environments.

Before deploying your IBW solution, review the top vendors in the market and partner with one that understands and can fulfill your specific technology and construction needs. A vendor that is already approved by most wireless carriers can free up your IT department from all the regulatory hassles by obtaining the carrier approvals needed for IBW installation—as well as bring essential expertise in the design and the deployment of IBW technology.



Furthermore, make sure your vendor can:

- Leverage the existing cabling infrastructure without sacrificing future scalability as your technical requirements evolve - offering great savings as well.
- Deploy and maintain the system using a local project management and technical support team.
- Offer knowledge and expertise of the ordinances implemented since 9/11 to ensure your facilities meet all the necessary codes and requirements.
- Prepare your facility to be well equipped to handle mission critical communications during emergency situations for police, fire, and other first responder personnel.

Your IBW deployment can be a phased approach to meet your budgetary objectives. This ensures that the end result is a solution that meets the high demands of today's wireless and mobile-savvy workforce. If you are a top healthcare or educational institution, your reliable cellular connectivity should match the high-quality service you deliver, allowing you to maintain a competitive business edge while attracting and retaining the best professionals in the market.

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