



Connecting Cellular Callers at The Borgata

CASE STUDY

CHALLENGE

The Borgata Hotel Casino and Spa offers an unparalleled travel experience on the East Coast. The 2,000 room luxury casino-hotel, located at Renaissance Pointe in Atlantic City, presents a destination designed to rival those once found only in cities such as New York City and Las Vegas.

After igniting Atlantic City's revival with its 2003 opening as the first new hotel property in 13 years, the Borgata Hotel Casino and Spa has hosted near-capacity crowds since its debut. The resort offers 2,000 guest rooms, a 161,000 square-foot casino, 14 restaurants, a shopping arcade, and two theaters that host top industry headliners. In addition, the property is now building a 40-story expansion tower that will house an additional 800 guest rooms along with more conference facilities.

Today's travelers demand that their cellular phones work reliably wherever they go. While Nextel deployed in-building coverage for use by hotel staff and guests when the resort opened in 2003, visitors with other cellular carriers have been left with spotty coverage that relied on signals from external cell sites. To remedy the situation, the Borgata decided to purchase and deploy its own, multi-carrier in-building cellular system. Now, thanks to the InterReach Unison® system, the Borgata supports traffic for Cingular subscribers, with Sprint coming online in early 2007. Other major carriers are also in various stages of negotiations with the resort to offer coverage through the in-building system to their customers as well.



BRINGING THE NETWORK INSIDE

As in many cases, the Borgata's initial in-building cellular coverage was installed and maintained by a carrier—in this case, Nextel. The Borgata had standardized on Nextel's push-to-talk phones for its staff, and Nextel deployed an in-building cellular system to deliver clear and reliable coverage throughout the facility. For visitors using other cellular providers, however, coverage came from external cell sites in the Borgata's vicinity. Since distance and building materials tend to block wireless signals, these other cellular users had spotty coverage at best.

"Customers were very upset that they did not have coverage within the facility," said Jerry Emens, telecommunications engineer at the Borgata. "We had been getting complaints since July of 2003."

When it sought to deliver multi-carrier coverage, the Borgata opted to purchase its own system in order to speed deployment and minimize disruption to hotel operations. "We wanted to purchase the new system outright because we could get it installed quickly and over a short period of time," says Rich Rudzinski, director of technical services at the Borgata. "It was less disruptive to deploy a multi-carrier system all at once and then bring on the carriers one at a time. Otherwise, we would have had to make separate deals with each carrier and have individual installation cycles for each of them."

In fact, Nextel also saw the need to support other carriers, and was in favor of the expansion.

THE SOLUTION

The original Nextel system installed in 2003 covered approximately 1.2 million square feet, including guest rooms, public areas, and the "back of the house" at the Borgata. The InterReach Unison® system was supplied for this deployment, which included a Nextel on-site base station and three Unison Main Hubs in the facility's telecommunications room, eleven Expansion Hubs, and 73 remote access units (RAUs) with attached antennas.

Unlike many other in-building cellular systems, the Unison solution leverages existing fiber optic cabling in the Borgata's building risers, and then standard Cat-5 network cabling to link Expansion Hubs with the distributed RAUs and antennas that deliver the signals. This Ethernet-like "active" architecture is far easier and less expensive to install than older technologies that use heavy, inflexible shielded coaxial cabling, and it allows the Unison system to deliver consistently high signal strength throughout the hotel. In addition, the use of active network components in the Unison system means that it has end-to-end management and alarming – if one RAU or antenna goes down, the problem is immediately noticed and can be corrected.

For the existing Borgata facility, the new Unison system mirrors the existing one. It includes new Main and Expansion hubs to support Cingular, Sprint, and other customers. One set of hubs is needed for each carrier, but the existing RAUs can be used for all of the new carrier frequencies being supported. Cingular has voice and low-speed data services operating now, and will be adding its high-speed data service (HSDPA) in early 2007 to better support users of Blackberry and other smart phone devices. Sprint will also be deploying both voice and data services when it comes online in the first quarter of 2007.

CALL VOLUME BEATS THE ODDS

Cellular service is a lot like electricity – nobody cheers when it works, but everyone complains when it doesn't. While customer complaints have rapidly disappeared with deployment of the new in-building coverage, the real gauge is call volume. Before it deployed its coverage in the summer of 2006, Cingular had projected a certain call volume through the system. But since service initiated, call volume has doubled projections.

"Cingular is extremely happy at the volume of traffic from customers, astonished that it's doing so well, and very happy to have come on board at The Borgata," says Emens.

As a result, the in-building cellular systems have created a winning situation for carriers, the resort owners, employees and guests at the Borgata.

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