



INDOOR WIRELESS COVERAGE
HISTORIC MOUNTAIN RESORT AND CONFERENCE CENTER

CASE STUDY

BACKGROUND

It is easy to imagine Presidents and other dignitaries walking among the opulent foyers, formal sitting rooms, dining rooms and grand ballroom of The Homestead. Built in 1766, The Homestead's luxurious interior is completely restored to its former grandeur. Guests enjoy an "incredibly grand escape" in this unique retreat; it is an atmosphere that is both traditional and vibrant – as if it were all really brand new.

Part of the escape lies in the location. Although The Homestead is relatively near our nation's capital, it is tucked away among the beauty of Virginia's Allegheny Mountains. Its 15,000 acres provide golf, skiing, horseback riding, hiking, tennis, a spring-fed indoor pool and spa.

Those mountains and the sprawling brick facilities made it nearly impossible for guests to access wireless services. When new owners purchased The Homestead, they set out to retain and restore its opulence and gracious atmosphere while delivering complete luxury, convenience and services. They provided guests state-of-the-art conference facilities and, with them, promised to provide complete and reliable access to all types of wireless services.



THE PROBLEM

SunCom, an award winning wireless carrier in the Southeast, has added a GSM overlay to its network, transitioning from pure TDMA service to accommodate customers using both types of services. As part of this effort, the carrier built a new macro site to deliver both TDMA and GSM service to The Homestead resort and conference center.

Despite the nearby cell site, there were some areas inside the expansive brick building where there was minimal coverage. Because the building is Y-shaped with the base of the Y being rather wide, the conference center, located in the middle, was especially shielded from the signal.

"With the increased importance of mobile phones and other wireless devices, vacationers and business guests rely on having wireless coverage wherever they go," said Mike Yglesias, SunCom's RF engineering director. "But providing reliable coverage everywhere can be a challenge, particularly inside buildings such as the unique structures at The Homestead. We needed an effective and economical way to supplement the nearby base station and guarantee signal quality everywhere within the complex."

To provide wireless service for all guests within the resort, Triton needed a system that would support TDMA and GSM devices and would easily accommodate future technologies as well. Given the remote location, Triton also wanted a solution that would require little or no maintenance.

THE ADC SOLUTION

ADC Wireless worked with Triton to deploy ADC's Digivance® Indoor Coverage Solution (ICS) to provide consistent coverage and increased capacity throughout the large brick resort and conference center. A fiber optic line brought both RF signals inside the building from TDMA and GSM base stations. Once inside the building, the Digivance ICS system handled both GSM and TDMA services seamlessly. Three indoor antennas were installed to enhance service throughout the entire facility. These antennas, about the size and shape of a standard smoke detector, go virtually unnoticed within the building's grand interior.

BENEFITS REALIZED BY THE CUSTOMER

The Digivance ICS system dramatically enhanced coverage throughout the resort interior, providing consistent signal quality and adding capacity to handle concentrations of calls and data services in areas such as the conference center. ADC's solution allowed Triton to cost effectively deliver excellent quality of service within The Homestead, enabling the resort to deliver complete wireless access and convenience within the grand and luxurious turn-of-the-century resort.



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