



## DIGIVANCE® STADIUM COVERAGE

### CASE STUDY

#### BACKGROUND

The crowd roars as the winning run crosses home plate. The venerable stadium sways beneath 35,000 people as they jubilantly stomp their feet and watch the home team celebrate on the field. Almost in unison, thousands of cell phones light up. Fans want to call friends and family not at the ballpark, and share the experience with them.

Without sufficient wireless capacity and coverage throughout the stadium, however, mobile phone customers won't receive the service they expect. Dropped calls and failed service attempts await. As a result, their wireless service provider risks subscriber churn and lost revenue.

#### THE PROBLEM

A national wireless service provider wanted to improve its coverage by adding wireless capacity to a historic baseball stadium in northeastern United States. An existing cell site was located behind the 30-foot-high wall in left field. Unfortunately, the cell site did not provide adequate coverage to meet subscriber needs. Capacity was frequently overtaxed. Plus, coverage within the confines of the stadium – including concourses, concession stands, and rest rooms – was compromised by pillars, walls and beams.



A second cell site was installed behind the right-field grandstand. The macro site would handle the majority of the traffic. The new site would manage overflow and address coverage holes. Unfortunately, the RF signal required transport to reach some obstructed areas, as well as the grandstand, where additional capacity was necessary.

A distribution system capable of RF simulcast would improve coverage and add wireless capacity. But, it needed to be unobtrusive in order to protect the visual integrity of the historic stadium. Plus, the installation, commissioning and turn-up had to be completed quickly – the team’s season opening game loomed a few days away.

## THE ADC SOLUTION

The service provider chose ADC’s Digivance® Street-Level Coverage Solution (SCS) to increase wireless capacity and to extend coverage for hard-to-reach areas in the stadium. The SCS features patented digital RF fiber technology to distribute service between an existing cell site and eight remote antenna units.

ADC provided a pre-wired universal host bay to be collocated at the new cell site. The small, lightweight remote units offered several mounting options, which enabled the service provider to install them inconspicuously on beams in strategic locations around the stadium. ADC even painted them an exact shade of green to match the color of the ballpark’s infrastructure. Plus, the environmentally sealed units offer protection against harsh weather elements, which makes them virtually maintenance free.

Once the host and remote units were installed, ADC completed turn-up and commissioning in one day. The RF spectrum was transported digitally between the host and remote units via fiber optic cable. The remote units interface with an antenna to distribute the signal. As a result, the service provider could extend its coverage to reach problematic coverage holes with minimal investment and no maintenance costs.

## BENEFITS REALIZED BY CUSTOMER

ADC’s Digivance SCS offers the service provider an easy-to-use, cost-effective option for expanding wireless capacity. It enables the service provider to redistribute capacity to strategic locations where and when it is needed most.

The remote units enable coverage to reach every seat in the ballpark. One unit even extends coverage for a roadway that runs by the stadium. Minimal signal strength is approximately -70 to -75 dBm, which surpasses industry standards. Plus, with EMS software, forward and reverse path gains can be optimized in 1 dB increments to meet required levels.

Representatives from the service provider indicate that the Digivance SCS is “working very well”. Fans who get to share the experience of the next big win via cell phone – without interruptions or service loss – would undoubtedly agree.



### Web Site: [www.adc.com](http://www.adc.com)

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