

The Cynthia Woods Mitchell Pavilion

RF Connect and Corning MobileAccess Chosen to Support the World's Second-Most Heavily Used Amphitheater

Background

The Cynthia Woods Mitchell Pavilion is an outdoor amphitheater providing the Greater Houston region with an array of performing arts and contemporary entertainment in a setting of unparalleled beauty. The Pavilion - also known as The Center for the Performing Arts at The Woodlands - seats 16,500 guests and encompasses 550,000 square feet of buildings and lawn space. It is the second-most heavily used amphitheater in the world.

The Wireless Challenge

Patrons of venues like The Pavilion increasingly want to use their wireless devices to communicate and share their experience and photos with friends and family. The Pavilion is situated in a natural bowl surrounded by a thick forest of tall pine trees, blocking cellular signals from entering the outdoor pavilion, and the seven buildings on the property. As part of broad network improvement efforts throughout the country, the wireless operator elected to install a Distributed Antenna System (DAS) to enhance cellular service at The Pavilion.



Photographer: Ted Washington

Case Study Summary

The 550,000-square-foot Cynthia Woods Mitchell Pavilion consists of a 16,500-seat amphitheater and seven buildings. The Pavilion is surrounded by a thick forest of tall pine trees, blocking all CELL/PCS signals from the amphitheater and surrounding buildings.

Business Challenges

- Provide a cost-effective solution supporting 2G, 3G and 4G services across the property today with capability to gracefully add new operators in the future
- Accommodate the data needs of the venue's full-capacity crowds
- Maintain venue aesthetics and environmental requirements

MobileAccess2000 Results

- Single infrastructure supports multiple services
- System results meet wireless carrier's criteria for voice and data reliability
- The MobileAccess2000 easily accommodates the addition of future carriers to the system

Solution

The wireless operator hired RF Connect, a national leader in the design and deployment of high performance wireless networks, to provide and install the MobileAccess2000 platform. RF Connect selected the Corning MobileAccess solution because of its unique ability to support multiple services - including 4G LTE Multi-Input/Multi-Output (MIMO) - on a single, broadband infrastructure. The system is also scalable and can easily accommodate future upgrades or expansions without interrupting existing services.

RF Connect conducted a site survey, measuring existing macro signals from all of the required wireless carriers and designed an indoor/outdoor DAS to propagate wireless signals from the carrier, and accommodate other wireless carriers in the future.

One of the challenges RF Connect had to tackle was designing and installing DAS elements complementing the aesthetic and structural requirements of the unique pavilion structure. The antennas, cabling, and associated equipment had to blend in with all existing structures.

Badly damaged by Hurricane Ike in September of 2008, the roof had been re-built and is now supported by spires that can sustain 110 mile per hour winds. The antennas in the pavilion and stage areas had to be mounted on these wind-resistant spires. Due to the structural design of the spires, RF Connect needed to design custom mounting brackets that were able to attach to the spires, support the DAS equipment, and be aesthetically pleasing.

Today, the MobileAccess2000 system cost-effectively covers 550,000 square feet of space for The Pavilion and all seven buildings, supporting CELL/PCS, AWS, and 4G LTE wireless services. The operator's support of the Corning MobileAccess system means that as the use of 4G LTE devices increases on their network, users at The Pavilion will enjoy one of the fastest commercial cellular technologies available today. The solution can easily scale to support future wireless carriers and services with the addition of service modules in centralized locations without the need to add cabling or antennas.

As part of The Pavilion's mission to entertain and enrich the community, they strive to provide the best possible experience for their visitors. The Corning MobileAccess solution installed by RF Connect delivers high-performance voice and data services at The Pavilion, allowing visitors to stay connected throughout the property.

For Additional Information:

Corning MobileAccess

www.corning.com/mobileaccess

RF Connect

www.rfconnect.com