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CommScope Delivers **World-Class Enterprise and Wireless Solutions** to Dallas Cowboys' New Stadium in Arlington, Texas

"Cowboys Stadium will become one of the most visible buildings in the world and, as a part of that, we needed the most advanced communications network we could find—not just for today but also looking into the future. CommScope helped us craft one of the finest high-performance networks on the planet. We have a vision for a place that reflects the emotion and competition encapsulated by the stadium, and CommScope has helped bring that to life."

Jerry Jones
Owner, Dallas Cowboys

Dallas Cowboys' New Stadium Network Facts

- The new stadium's infrastructure required more than five million feet of CommScope SYSTIMAX® copper and fiber cabling, roughly the walking distance from Dallas to Chicago. Of that amount, the stadium will use approximately 2.7 million feet of SYSTIMAX GigaSPEED® X10D cabling. That entire cable length would stretch approximately from Dallas to Houston to Austin and back to Dallas.
- With its enormous 600-ton scoreboard and the roughly 3,000 monitors positioned throughout the stadium, the stadium will be the world's largest IPTV installation.
- The new data center at the stadium will serve as the Cowboys' enterprise data center, supporting the stadium and the Cowboy's facilities at Valley Ranch.
- The CommScope network installation, which started in September 2008 took nine months to complete.
- The Cowboys' SYSTIMAX iPatch® System installation is a first for NFL stadiums. The system helps Dallas Cowboys IT staff document and manage activity from more than 40,000 copper and fiber ports.
- The stadium has 69 intermediate distribution frames (IDFs) and a single data center.

The Dallas Cowboys, often referred to as America's Team, have a fan allegiance that spreads outside the franchise's North Texas home. The Cowboys are one of the most powerful sporting brands in one of the most recognizable sporting leagues in the world. In the Cowboys' rise to glory, the team occupied the most unique stadium of its era, Texas Stadium, which boasted a "giant hole in the roof" that enhanced the fan experience.

As the sport grew and stadium technology became an integral part of the game day atmosphere, it was time for the Cowboys to transition from their home since 1971. Dallas Cowboys owner Jerry Jones had visions of creating the nation's largest and most spectacular venue that could not only be used for Cowboys games, but other special events like the Super Bowl, Cotton Bowl, NBA All-Star Game, FIFA World Cup Soccer and even concerts. The new Cowboys Stadium found its home in Arlington, Texas, incorporating elements of Texas Stadium like the shape of the roof's opening and the Ring of Honor, but leaving behind an outdated communications network. For a world-class stadium, the Cowboys were in need of a world-class network and turned to CommScope, a seasoned veteran in the communications infrastructure market.

Cowboys Huddle About New Network Needs

Cowboys Stadium wasn't dreamed up to be just another NFL stadium. Jones said he wanted a stadium that represented the Dallas Cowboys' innovation and progressiveness for the future while upholding the traditions of the old stadium. At more than triple the size of the former venue, Cowboys Stadium is built to entertain up to 100,000 fans on an average football game day. Add to that players, coaching staff, media members, fans, employees and event security, and the number of people in and around the stadium grows immensely. To keep the fans coming back, the stadium needed an entertainment hook besides football. Technology became the answer.

When Pete Walsh, the Dallas Cowboys' head of technology, began planning for the new stadium, he and his team were asked by Jones to "design the future." From the outset, Walsh wanted to align himself with the best, most experienced technology partners that could help bring those large expectations to life and fans closer to the action. The centerpiece would be a one-of-a-kind, four-sided scoreboard suspended 90 feet above the playing surface that features the world's largest LED high-definition video displays. The enormous screen would be joined by 3,000 TV monitors positioned throughout the stadium in luxury suites, pro shops, clubs and concession stands, making it the world's largest internet protocol television (IPTV) installation.

The digital media would rely on a single network. Having a network infrastructure that could provide complete control over all systems such as digital audio and video, voice over internet protocol (VoIP) phones, HVAC (heating, ventilation and air conditioning), access control and most building management applications would give the Dallas Cowboys IT staff increased vision, knowledge and control to heighten the stadium experience.

While digital media helps enhance the fan experience, the Cowboys wanted to ensure that fans could share the excitement with friends and family not present at the event. Stadiums present unique challenges in providing wireless services, with game days requiring a cellular network that supports the equivalent of a small city in a massive structure notorious for difficult signal penetration. Sending a cell phone picture or checking e-mail from your phone can prove daunting without enhanced coverage and capacity solutions.

"When planning for the new stadium, one of the things we did was we went to our technology partners to understand the roadmaps on what technology was going to be like over the next decade," Walsh said. "Whether it was computer systems, scoreboards, digital signage and future applications, all of that future technology was being driven by a converged network infrastructure. We needed a communications infrastructure provider that was a proven market leader with innovative solutions that could handle future applications. Those solutions also had to handle the high amounts of network traffic needed to support the stadium during an event. With so much riding on our network, it was critical that we find the right partner that exceeded the standard and could live up to the higher expectations set forth."

With a regional office in nearby Richardson, Texas, CommScope began a lengthy courtship with the Cowboys that spanned several years. Along the way, Walsh and his team became familiar with CommScope's Enterprise Solutions and Andrew Solutions™ business units and their breadth of solutions, including the leading SYSTIMAX brand, that differentiates CommScope in the marketplace. Team representatives visited CommScope's Executive Briefing Center locally to receive further insight. When CommScope became one of the final network providers in consideration, Walsh and his team visited CommScope's Claremont, N.C. manufacturing facility where they could see first-hand the unprecedented control over the entire manufacturing process. The behind-the-scenes look helped make the Cowboys' final decision an easy one.

CommScope Wins Landmark Cowboys Stadium Bid
CommScope was chosen to provide network infrastructure and cellular coverage and capacity solutions for the Dallas Cowboys' new stadium. CommScope provided advanced connectivity solutions that support all of the stadium's core operations and communications requirements for fans, staff and public safety officials.

"Cowboys Stadium will become one of the most visible buildings in the world and, as a part of that, we needed the most advanced communications network we could find—not just for today but also looking into the future," Jones said. "CommScope helped us craft one of the finest high-performance networks on the planet. We have a vision for a place that reflects the emotion and competition encapsulated by the stadium, and CommScope has helped bring that to life."

CommScope's Design Services Team was brought in to help engineer a showcase data center that would not only serve as the data center for the new stadium but also for the franchise's headquarters at Valley Ranch and Jones' other corporate holdings. The nine-month installation had a hard deadline that spanned right up to the first event, a George Strait concert on June 6, 2009. There would be no disappointing the more than 60,000 country music fans that purchased tickets to the sold-out event. Walsh said without the guidance of the Design Services Team, the implementation project might have been several months behind.

Cowboys Stadium's opening was celebrated throughout the summer as event-after-event left spectators awestruck and ready for the Cowboys' inaugural season inside their new home. The state-of-the-art venue streamed media without a hitch, utilizing CommScope's SYSTIMAX® high-performance network solutions to stream video content and power the stadium's data center and other technical operations. In addition, the stadium featured an extensive in-building wireless communications network from Andrew that provides complete cellular coverage in the stadium and its surrounding property for all spectators and team officials, coaching staff, employees and public safety agencies. When it came to communications infrastructure, CommScope proved to be the winning formula for the Dallas Cowboys.

"With CommScope's world-class communications infrastructure, one of the things we were able to do was to provide a new technology experience for all of our fans. For the first time in the history of the Dallas Cowboys, computers and enhanced stadium technology are one of the main thrusts of the organization," Walsh said. "At our old stadium, we would simply flip on the lights roll a football out and start playing. In our new stadium, everything we do utilizes our advanced communications network. For the first time, we're able to take that Dallas Cowboys experience and expand it into something that fans, staff and stadium sponsors can really appreciate."

SYSTIMAX Solutions Make Cowboys Stadium Most 'Intelligent' Stadium in the NFL
The Cowboys' showcase enterprise data center at the new stadium consists of a 5,000-square-foot workspace with 69 intermediate distribution frames (IDFs) throughout the stadium. Operating off a single backbone, SYSTIMAX products like GigaSPEED X10D copper cabling, LazrSPEED® 550 multimode fiber cabling, VisiPatch® 360 and InstaPATCH® Plus harness the new stadium's technology and link building systems over a converged network infrastructure in order to supply more efficiency, higher productivity and increased comfort. This kind of network convergence brings a host of opportunities. The same IP network that provides video content to the high-definition LED video displays also controls air conditioning, the phone and data systems, roof movement, lighting and many other applications that help complete the ultimate fan experience.

Cowboys Stadium is one of the first stadiums in the world to utilize the SYSTIMAX iPatch® Intelligent Infrastructure Solution to strengthen stadium and network security. The stadium IT staff relies on the iPatch Solution to eliminate the blind spots in the network, detect unauthorized network access in real-time and the location of the breach, monitor all network moves/adds/changes, eliminate documentation errors and quickly solve network troubleshooting. With the Cowboys utilizing VoIP phones in the new stadium, the iPatch Solution also handles E911 calls, aiding emergency responders in finding a person in need when emergency numbers are dialed.

"To give you an idea on size, the new Cowboys Stadium can fit three of the old stadium inside. If someone were to pull a plug somewhere or do something to the network, you could spend days searching for the problem area," Walsh said. "By utilizing the iPatch system, we're able to very quickly identify the problem, giving our IT staff better management of all the cabling and IDFs throughout the stadium. When we first looked at the iPatch Solution, our entire staff could see the benefits immediately, especially in a stadium of this magnitude with so much depending on the network. The biggest thing for me is that it gives us assurance that things are set up properly and that issues can be solved with minimal downtime."

Andrew Solutions Gives Cowboys Fans, Safety Personnel Enhanced Cellular Coverage
With its size and elaborate design, the Dallas Cowboys' stadium required one of the largest and most complex indoor cellular systems of any stadium in the world. CommScope was able to step in here as well. Its Andrew division is a global industry leader at solving the technical challenges posed in providing coverage and capacity solutions in stadiums, subways, airports, skyscrapers and related structures.

Through Andrew, CommScope supplied Cowboys Stadium with a complete multi-carrier, multi-service wireless solution that supports commercial cellular services for general fan and employee usage; public safety services for police, fire, ambulance and federal agencies; and private, internal services for coaching staff and game officials' communications. It features active (ION™ optical repeaters) and passive (cable, antennas and components) products for a turnkey integrated distributed antenna solution covering more than 20 stadium operations and functions, including ticketing, concessions, halftime staging, data center, maintenance and team offices. In addition, a special UHF frequency can support coach-to-coach and coach-to-player communications, while a VHF channel supports FBI services and 700 MHz and 800 MHz channels link police and fire crews in and around the stadium.

"Andrew installed into Cowboys Stadium one of the most advanced and largest indoor cellular systems in the world," Walsh said. "Enhanced cellular coverage should amplify the fan experience as well as make it a safer place for fans to attend. On game day, we expect over 100,000 attendees and almost all of them will want to share a picture or text about their great time at Cowboys Stadium. None of this would be possible without Andrew's complete cellular coverage and capacity solutions."

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