
MELBOURNE CRICKET GROUND

A complete audio revamp at MCG, with Auditoria and Rutledge AV providing a d&b audiotechnik system.

DIRIYAH ARENA

A groundbreaking temporary 15,000-seat stadium delivered by Arena Group for the Clash on the Dunes.

GEORGE VAUGHAN

Ascot Racecourse's Head of Technology discusses the Smart City project at the historic venue.

VIDEO FOCUS

We take a closer look at the impressive products and eye-catching projects from the world of video.

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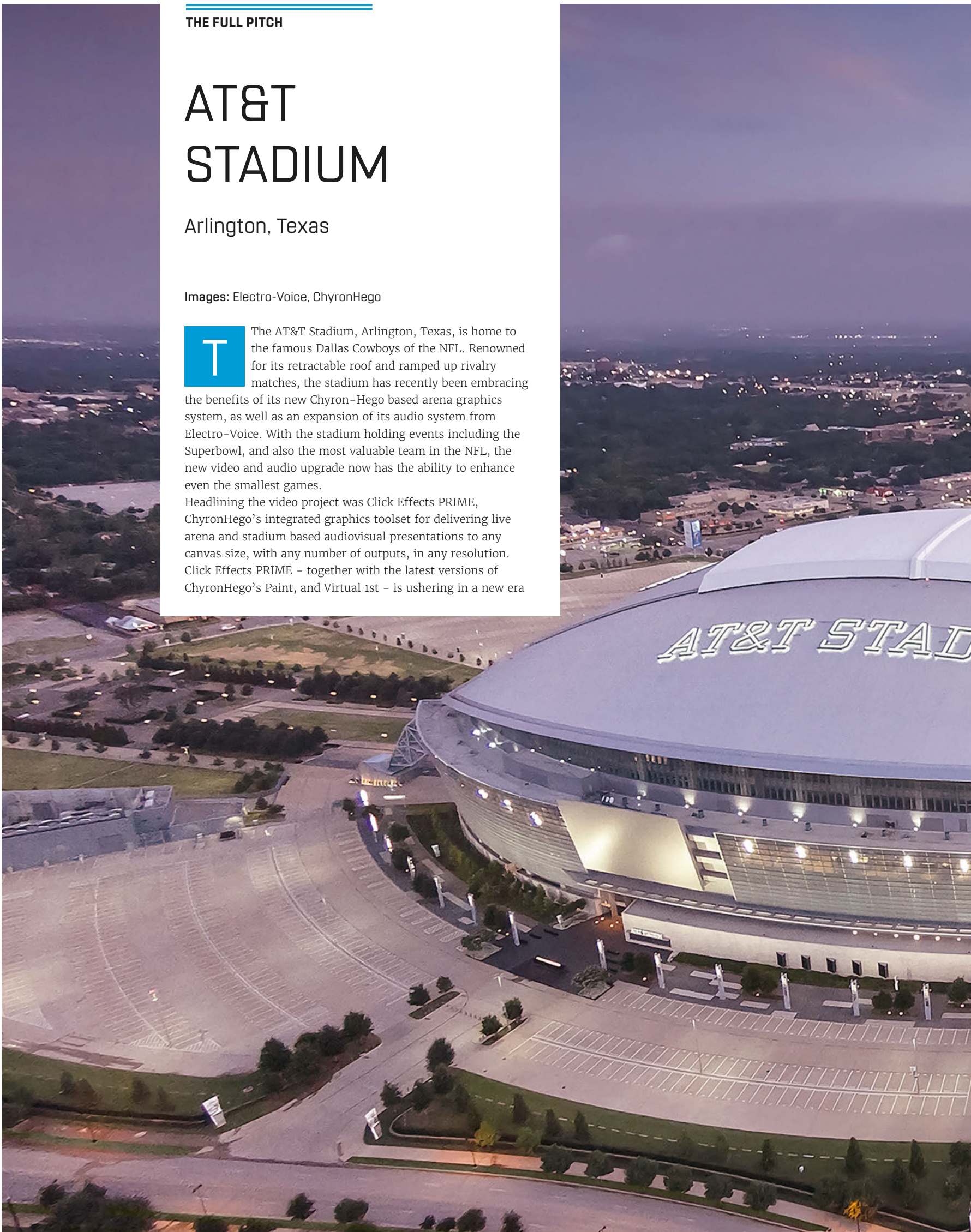
AT&T STADIUM

Arlington, Texas

Images: Electro-Voice, ChyronHego

The AT&T Stadium, Arlington, Texas, is home to the famous Dallas Cowboys of the NFL. Renowned for its retractable roof and ramped up rivalry matches, the stadium has recently been embracing the benefits of its new Chyron-Hego based arena graphics system, as well as an expansion of its audio system from Electro-Voice. With the stadium holding events including the Superbowl, and also the most valuable team in the NFL, the new video and audio upgrade now has the ability to enhance even the smallest games.

Headlining the video project was Click Effects PRIME, ChyronHego's integrated graphics toolset for delivering live arena and stadium based audiovisual presentations to any canvas size, with any number of outputs, in any resolution. Click Effects PRIME – together with the latest versions of ChyronHego's Paint, and Virtual 1st – is ushering in a new era







of 4K production on the LiveFX Endzone board at AT&T Stadium.

“We have one of the most complex shows in in-arena sports, so we don’t have one machine that fits all of our needs, we look for different specialists. We link remotes all throughout our Click Effects systems to create those immersive moments in games,” said Jake Kelso, Manager of Events Presentation for the Dallas Cowboys. “The paint telestration tool, especially, has brought a new dynamic that we can use for sponsorship, highlights and live playback, and that versatility is huge.”

The Cowboys’ first LED to display 4K content, and the team’s first Click Effects PRIME installation is the largest LiveFX Endzone board. Used primarily for game support graphics such as replay videos and fan entertainment during breaks, the board went live with 4K video clips and graphics driven by Click Effects PRIME.

“ChyronHego systems have been our mainstay since day one. Personally, I’ve been using its products for the better part of my 40-year career, which gives me a keen perspective on how well these technologies have improved and evolved,” said Dwin Towell, Director of Broadcast Engineering for the Dallas Cowboys. “Our migration to 4K will eventually require replacement of every screen and system in this stadium, but we’ve never questioned whether ChyronHego was the right graphics provider in this huge undertaking. With Click Effects PRIME being the perfect example, these solutions are mature, dependable, and very well-supported. Also, since ChyronHego is an industry-standard for graphics production, it’s easy to find technicians who are well-versed in the systems.”

Eventually, Click Effects PRIME will drive 4K graphics to every display in AT&T Stadium, including the huge centre-hung LED, two levels of ribbon boards, gap boards over the four entrances, and more than 3,000 smaller screens located throughout the stadium.

The new native GPU-based technologies in Click Effects PRIME give the Cowboys the power to deliver HD and UHD content to multiple screens simultaneously, and synchronise multiple outputs in native resolutions. This capability makes ‘moments of exclusivity’ or MOEs possible, in which the team is able to trigger multiple displays throughout the stadium network and display a single, exciting graphic on each, for example, a large “Touchdown!” graphic when the Cowboys score or an eye-catching image of a key player as they reach a lifetime career record.

In addition to Click Effects PRIME, the Dallas Cowboys have utilised the latest versions of the Paint telestration tool, and Virtual 1st ‘down and distance’ football graphics tool. The Cowboys’ deployment of Paint and Virtual 1st is unique, with inputs from two separate cameras delivering north and south views to the centre-hung screen to give each fan the best possible viewing angle. Paint and Virtual 1st are able to calibrate both inputs quickly and automatically to show the virtual first down line and enable telestrated explanations of replays from any vantage point on the field.

When the Dallas Cowboys opened AT&T Stadium in 2009, it boasted the world’s largest Electro-Voice sound system in a permanent installation, including over 240 line-array loudspeakers from the X-Line family. Gary French, Audio Engineer in charge of the Dallas Cowboys,



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the AT&T Stadium wanted to ‘improve coverage, loudspeaker delay management and evaluate the performance possibilities inside the venue’ with the recently updated audio system. The design team, spearheaded by Kevin Day of WJHW, selected Electro-Voice systems for their audio quality, reliability and depth of control provided by the IRIS-Net processing and monitoring platform. After enthusiastic approval from team owner Jerry Jones, Pro Media Audio Video was enlisted to help coordinate the challenging installation.

Fast-forward to 2019, noting that the many touring concert acts coming through the world’s largest domed stadium simply do not carry enough PA to provide adequate coverage for the upper seating areas, the audio team decided to take advantage of Electro-Voice’s scalability to address the challenge.

“We’re always working to improve the fan experience for all events, not just on game days,” said Gary. “Most concert tours augment their traveling systems with our Electro-Voice arrays as the delay system for the upper levels. We decided a little extra coverage would be a big upgrade for those events.”

The Cowboys’ audio team worked with System Programmer, Richard Bratcher, along with original design and installation partners including Kevin Day of WJHW, Head Engineer, Demetrius Palavos, and COO, Ted Leamy of Pro Media Audio Video, and the Electro-Voice engineering team. Together, they determined that the 14 XLCi127DVX compact three-way delay systems covering the upper level could be scaled up to produce smoother coverage with improved intelligibility.

Ted Leamy of Pro Media Audio Video reports that the upgrade went very smoothly: “This project is a great example of using

real-world experience hand-in-hand with predictive computer models to improve a system,” he said. “By listening to the customer, we find ways to improve a system that already sounds great. We’re all extraordinarily pleased at the increased intelligibility we’ve achieved.”

The upgrade includes two added XLC arrays on each side of the stadium, plus the addition of one more loudspeaker element to the 14 existing arrays serving the 400 level, for a total of 54 added boxes. The system is also bolstered with 20 additional Electro-Voice TG series amplifiers, each equipped with RCM-26 remote control DSP modules. One additional NetMax N8000 digital matrix controller was also added. The IRIS-Net platform’s proven stability and scalability was a key factor in the expansion.

“Having used this system for every type of event, it’s amazing how flexible it is,” added Gary. “We’ve had no real issues with it this whole time, and Electro-Voice is there for us whenever we decide to tweak something. After 10 years, everything still looks and sounds new and I’ve been really happy with it. You can’t ask for more than that. Our stadium is, and continues to be, one of the most technically up to date for live sports and entertainment in the world,” he concluded.

As the AT&T stadium is one of the most expensive stadiums ever built, the new video and audio systems have added to the further finer things this venue has to offer. Fans will never miss the action, whether they’re watching a home game or The Rolling Stones in roaring concert alongside 100,000 other fans. The AT&T stadium can now continue its legacy and look forward to a new age of HD, sonic sounding sport, in a venue that is looking to be one of the best the USA has to offer.

SYSTEM INTEGRATOR: Pro Media Audio Video, WJHW | **BRANDS:** Electro-Voice, ChyronHego | **WEBSITES:** www.promediaaudiovideo.com, www.wjhw.com, www.electrovoice.com, www.chyronhego.com