Graphics Step Up Their Game

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Widely regarded as a critical production element, today's sports graphics must enhance the on-air presentation, support image branding, and promote a better understanding of the game. Not only do viewers want to be dazzled and entertained, they want to be splashed with timely, relevant data about the key plays, performances, and standings impacting their favorite sport.

In recent years, sports fans have discovered a wealth of online resources, including game highlights, player statistics, and game analysis—and this "second screen" distracts their attention from the TV. Also, as the percentage of consumers watching video-enabled cell phones grows, sports fans are finding that sports entertainment and information is often right at their fingertips wherever they go.

It is in this increasingly diverse media environment that television broadcasters must attract viewers to their live sports shows and keep them glued to the set— because audience size and demographics still determine the commercial revenue that sustains them.

Optimized Workflow Promotes Cost-Efficiency

While broadcasters need to push the creative envelope on sports graphics, they've also got to tackle another challenge head-on—holding the line on operating costs and automating the graphics process from design to delivery.

For this reason, one of the most important trends in live sports graphics is optimizing workflow for greater cost efficiency. We've already seen that, in most cases, multiple devices, such as the production switcher, DVE, still store, and CG, have been replaced by a single, powerful, multi-faceted live graphics system that embodies graphics creation, realtime video effects, 2D and 3D animations, elaborate texting tools, and multilayered composites. And the two or three operators that used to be needed to produce live graphics have since been reduced to one.

Ultra-efficient workflow is also enabling one of the hottest buzzwords in live sports graphics—realtime data-driven graphics. To capture the excitement of the game and

highlight the action as it unfolds, realtime data-driven graphics bring the screen to life with a wide range of statistics that are continuously updated automatically.

Automating Score Board and Game Clock

The most basic iteration of realtime data-driven graphics is the scoreboard and game clock. Rather than having an operator manually update this on-screen display, it's become increasingly common for broadcasters to program their graphics systems to take a feed directly from the arena scoreboard and game clock to capture data such as team names, scores, innings, time remaining to play, and more.

Ideally, broadcasters should choose a graphics system that offers tools for developing custom interfaces to capture that data from the output ports of the top brands of scoreboards and displays in use at stadiums and arenas. The data, which streams to the graphics system with less than a second of delay, always reflects official displays at the venue—and does so far more accurately and effortlessly than can be done as a manual task. Once the data reaches the graphics system, it then drives the on-screen game clock and score box automatically.

Realtime Data-Driven Graphics Trend

Where realtime data-driven graphics have really changed the game in sports graphics is the ability to fill 2D and 3D graphics or animations with a steady stream of stats—player rankings, goals scored, team standings, records held or broken, an athlete's profile, and virtually any type of information that third party sports data services generally provide.

By subscribing to these data services, broadcasters can configure their graphics systems to take the service's realtime RSS feed and pass it straight through to their on-screen display just as it's received. Data can also come from web pages, Excel or Access spreadsheets, text files, and Oracle databases. The data can feed a lower third ticker streaming across the screen, or update the standings on a leader board or scoreboard— right before viewers' eyes.

ODBC, or Open Database Connectivity, is the most common industry standard protocol enabling graphics systems to pull data from databases and database services in order to import them into graphics templates. Another industry standard protocol commonly in use is Intelligent Interface, which is designed to push data from a variety of non-broadcast sources into graphics templates. Many high-end graphics systems also allow operators to manually input data, such as their local team's scores that have not yet been reported to national services.

Templates Automate Graphics Production

Templates are the most common mechanism for achieving automated, realtime data-driven graphics displays. Templates are pre-produced 2D or 3D graphics or animations that incorporate fields designating where certain types of data will be inserted and displayed.

As streaming data arrives, the graphics computer decides which statistics will be displayed and ushers them into the appropriate fields on the templates automatically. The graphics system is preprogrammed with instructions about how best to filter, prioritize, and display the incoming data on the templates.

Template graphics can be simple, clean and legible, such as leader boards or team rosters. Or they can be complex, multi-layered, 3D eye candy effects. For example, 3D playing cards, each with a different player's face, appear to be shuffled, and then each of these cards can be flipped over to reveal fresh data about that player's touchdowns, goals scored, awards, or other career highlights.

Artists only have to design one set of templates, which can then be used repeatedly for the entire season. Since a single template can be transformed into hundreds or thousands of different displays, the artist is spared countless hours of graphics creation, and consistent, high-quality image branding is assured across all telecasts.

Enhancing the Viewer Experience
In another significant trend, sports graphics have also moved right into the midst of game action—where they're keyed directly onto the playing field. While some of these graphics takes the form of virtual advertising—product logos, banners, or signs—on or around the playing field, others provide viewers with dynamic visual guidelines, such as offside lines for soccer, the 1st and ten yellow lines in American football, and identification of competitors in each lane of a race.

As sports graphics technology evolves, we're sure to see increased volume and complexity of graphics created for a game; better integration of graphics displays on virtual and hard sets; conversion of broadcast graphics for online and mobile distribution; as well as more innovative visual compositions designed to realize the creative potential of DTV's widescreen canvas.

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