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CASE STUDY
KVM TECHNOLOGY

SPORTS

FOX Sports Uses Black Box Emerald KVM Extension for the Return of NASCAR and Live Sports

CHALLENGE

New Constraints for Remote Production

FOX Sports was three weeks into the 2020 NASCAR season when the pandemic forced the shutdown of live sports events. Once NASCAR formulated its social distancing protocols and guidelines for resuming races safely, FOX moved forward in developing a new production workflow accommodating a much smaller on-site team and the need for distancing even in remote production trucks.

FOX typically sends a team of 150 people to NASCAR races, working along the track and spread across four production trucks. For the first race back, held May 17 at Darlington Raceway, FOX was limited to fewer than 50 people working on site.

To enable members of the production team to work remotely, FOX needed a bandwidth-efficient IP-based solution for moving video and control signals from equipment within on-site mobile production units to another production facility via the public internet. It was also critical that the desktop experience remained seamless for operators working remotely. Finally, to ensure that this solution could easily be installed in any mobile unit and brought up reliably with little engineering intervention, FOX also needed a solution with an intuitive and responsive interface.

SOLUTION

KVM Extension for Graphics and Replay

In preparing for production, FOX examined its traditional production model to identify essential on-site personnel, such as the camera operators and audio engineers involved in signal acquisition. After identifying critical on-site positions, FOX looked at how to shift other crew members to a remote model.

Just one FOX Sports reporter, Regan Smith, covered the live action in person, and the FOX Sports NASCAR commentary team of Mike Joy, Jeff Gordon and Larry McReynolds worked from FOX Sports studios in Charlotte. Graphics operators, broadcast associates, and replay operators

CLIENT:
FOX BROADCAST COMPANY

REGION:
NORTH AMERICA

INDUSTRY:
MEDIA & ENTERTAINMENT

SOLUTION:
EMERALD KVM OVER IP

KVM MATRIX SWITCHING

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SOLUTION (CONTINUED)

moved from on-site production trucks at Darlington Raceway to FOX facilities in Los Angeles.

Even in normal times, these operators are connected to their machines over a network connecting mobile production units. FOX untilized Black Box Emerald KVM over IP (keyboard, video, mouse) technology to extend that link across the country, essentially enabling remote control over a WAN. Working at ten distanced workstations in a decommissioned FOX tape vault, operators seamlessly controlled machines installed in trucks 2,000 miles away at Darlington Raceway.

Emerald PE extends video, transparent USB 2.0, and audio signals over the internet while providing the sharp image quality essential to professional graphics and broadcast applications. The KVM solution delivers every pixel of every video frame with lossless compression and supports resolutions up to 1920 x 1200 at 60 Hz.

Within the FOX remote workflow, the Black Box Emerald PE transmitters and receivers support remote control of replay and graphics systems, as well as devices used to input the stats that drive graphics and support commentary by on-air talent. The Emerald KVM units are built into the FOX "production anywhere" remote kit along with video encoders, switches, and computers, and this package connects readily into any vendor's mobile production truck.

"One of the things we're most proud of is that we've created ways to keep our shows the same size, and we found new ways to work with existing vendors and equipment," says Kevin Callahan, vice president of field operations and engineering at FOX Sports . "We've been interested in heading toward a 'production anywhere' for quite some time now, and we feel that our new production anywhere remote kit gives us an efficient and a sustainable model for the future."

RESULTS

Top-Flight Production, Safe Work Environment

"The great relationship between FOX and NASCAR was extremely important in enabling us to bring back live sports for fans across America," adds Callahan. "NASCAR was really the first major sport to return, and the workflow we developed was vital to producing a show that offered viewers a much-needed sense of normalcy."

Even as life returns to normal, FOX will continue to take advantage of this new remote production model. With the one team working at a central facility during production of various live events, FOX can bring greater consistency to its broadcasts and establish a more collaborative creative environment. Executives in Los Angeles benefit, as they can keep an eye on multiple productions at once. Talent living or working in other locations can more easily contribute to the broadcast, as well.

"Overall, the project was a huge success, and we've expanded on this model for other sports and the new NASCAR season," concludes Callahan. "As a result, we'll be able to add more production elements into the show without adding too many more bodies on site. By expanding the use of KVM over IP technology, we're able to keep our production team safe while giving viewers at home a richer broadcast product."

FOX finished out the rest of the 2020 NASCAR racing season using this remote production model and was able to leverage the same infrastructure and workflow to support its NFL and NCAA football coverage. FOX is in the midst of opening a smaller version of its "vault" in Pittsburgh for the 2021-22 NASCAR season, which launched Feb. 14 with the DAYTONA 500.