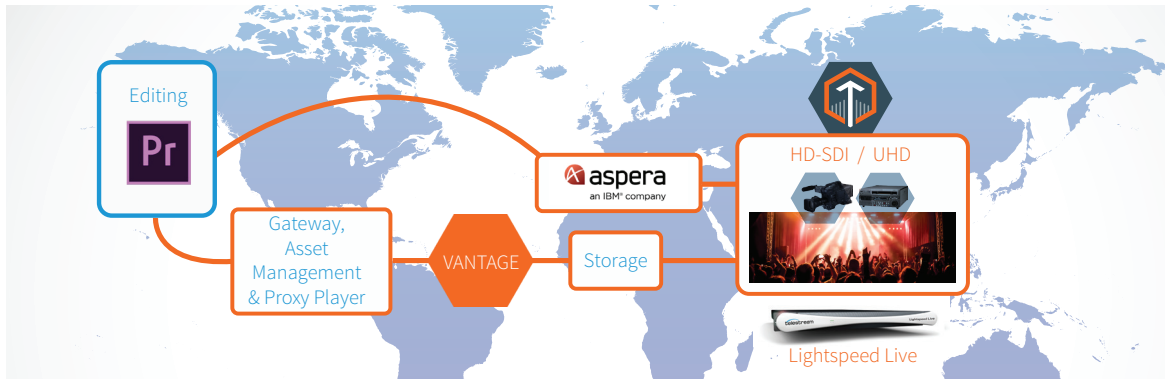


## Vantage & Lightspeed Live

Case Study: Streamlining Live Remote Production



# Streamlining Live Remote Production: FOX Sports and the FIFA World Cup–Russia 2018

### Summary

FOX Sports was looking to cover 64 World Cup matches in Russia while utilizing their Los Angeles production facilities. The solution was a revolutionary integration between Telestream and IBM Aspera, which enables high-quality streaming to remote teams in near real-time - all over standard IP networks.

Live captured feeds from Russia are delivered to FOX Sports' Los Angeles production facility, where creative teams begin editing as the event is taking place, without waiting for files to be first written to disk and then transferred.

### What was needed?

- Cutting-edge production workflows that leverage “home base” production capabilities to support live event production anywhere in the world.
- Downstream workflows that started immediately, shortening the production cycle and increasing content value.
- Avoiding the creation of entirely new facilities in Russia and the movement of staff to Russia for the duration of the tournament.

### Introduction

FOX Sports is the US English language home of the FIFA World Cup 2018, hosted in Russia, this year and for the next three World Cup tournaments. Its coverage will include 320 hours of original broadcast content and over 1,100 hours of total original content. In total, 38 matches will be broadcast on the network – more than were broadcast in the four previous World Cups combined.

### The Challenge

The FOX Sports Operations & Engineering team set out to create dramatic new efficiencies, leveraging existing, state-of-the-art production facilities in Los Angeles.

Teams must be able to operate on all files while they are still growing. To support a live event, the team in Los Angeles must be able to edit content while the match is ongoing, sending back clips for use at half time and during bridge programs.

The operation must keep within 30 seconds of live action. Any more delay than that and the production could not meet the audience expectation for live viewing.

Finally, these efficiencies have to be accomplished while supporting sophisticated production infrastructure. They must ingest 20 HD-SDI feeds per match, and with 64 matches in the tournament, over 700 TB of match content will be generated over the 30 days of World Cup. They will be ingesting two UHD-HDR feeds per match. For all of these they must create a cloud-based HLS proxy, as well as high-res AVC Intra in Los Angeles, all of which must be made available to their content management system. AVC Intra must also be written to local storage for two edit bays in Russia.

### The solution

To accomplish their goals, the FOX Sports team turned to Telestream and a revolutionary joint solution with Aspera. Integration between Telestream Vantage and Lightspeed Live and IBM's Aspera FASPStream enables high-quality streaming to remote production teams for near real-time editing and production - all over unmanaged networks.

The solution allows creative teams to begin working on a live capture feed delivered from a remote location while the event is taking place, without waiting for the entire file to be first written to disk and then transferred. Transcoding, packaging, editing and other downstream workflows can start immediately, significantly shortening the production cycle and increasing the value of the produced content.

For FOX Sports' World Cup operations, 22 Telestream Lightspeed Live Capture systems will support camera ISOs and other feeds not dedicated to the match, allowing the team to fully capture all event-related content into the content management system. Four feeds will route high res content directly to the Los Angeles production facility via Aspera FASPStream for editing in near-real-time. The editorial and production systems there can directly receive a full-resolution captured video with very low latency, meaning fewer on-site edit and production systems are required.

The Lightspeed Live units, combined with the Vantage transcoding and workflows provide direct delivery of professional production formats so that the content arrives "ready to work" in Los Angeles. By recording direct to AVC Intra, the team can reduce the number of transcoding steps experienced in traditional workflows, which deliver as J2K or MP4.

Additionally, traditional backhaul methods tie up edit bays in recording SDI; by delivering an edit-ready format over IP direct into the editor storage infrastructure, the Telestream solution enables editors to consume the live video almost instantaneously.

"In testing we were editing a growing file in Los Angeles that was about 14 seconds behind live. It was editing in place in Adobe Premiere."

– Kevin Callahan, VP of Field Operations & Engineering, FOX Sports

In addition to the HD workflow, the team needed to create a library of UHD-HDR material for use in feature pieces. The Telestream-Aspera solution includes two transmission paths out of Russia. All the HLS feeds enter into AWS through direct connect in Frankfurt, Germany and transit across the globe through AWS servers. They're then made available to the content management system as well as the production teams in Los Angeles.

All of this is accomplished without requiring expensive dedicated transmission lines. By utilizing only unmanaged public internet data connections (as opposed to dedicated point-to-point fiber leased lines and/or satellite), the FOX Sports team is assured that data lines are always available, ubiquitous and require no proprietary equipment or scheduling windows. Additionally, it provides optimized, secure delivery that dynamically adapts to bandwidth availability. The FOX Sports team in Russia will be able to deliver a single production feed from a given venue that can be dynamically repurposed to production, delivery and archival locations with the Vantage growing file support and transcode workflows. Full resolution on-venue recording can be scheduled, prioritized and delivered during off-peak periods for post-live production and archival uses.

### Ecosystem integration

Strong integration not just with Aspera, but with other ecosystem players such as Harmonic, EVS, AWS, Century Link, and ReachEngine has helped get the solution off the ground quickly.

Notes Callahan, "The Telestream technology at the core of the system could work with each of these partners to deliver the solution we needed," said Callahan. "It was quite a positive experience to work with the Telestream to get everything going on our time schedule."

### The results

FOX Sports' goal was to create a cutting-edge workflow that leveraged their "home base" infrastructure to support live event production anywhere in the world. The solution has proven to be cost-effective for the robust media handling capabilities it offers and is adaptable both to remote locations and to the needs of production staff at home.

This solution will allow FOX Sports to create and deliver more and better content to their audiences which means, in the end, it is the viewers who end up with a better experience.



[www.telestream.net](http://www.telestream.net) | [info@telestream.net](mailto:info@telestream.net) | tel +1 530 470 1300



Specifications subject to change without notice. Copyright © 2018 Telestream, LLC. Telestream, CaptionMaker, Episode, Flip4Mac, FlipFactory, Flip Player, Lightspeed, ScreenFlow, Switch, Vantage, Wirecast, GraphicsFactory, MetaFlip, and Split-and-Stitch are registered trademarks and Pipeline, MacCaption, e-Captioning, Tempo, VOD Producer, and Vidchecker are trademarks of Telestream, LLC. TitlePro is a trademark of NewBlue, Inc. All other trademarks are the property of their respective owners. April 2018