Fox Sports is the programming division of the Fox Broadcasting Company (owned by 21st Century Fox), responsible for sports broadcasts on the network plus its dedicated regional and national sports cable channels. Formed in 1994, after Fox's acquisition of the broadcast rights to National Football League (NFL) games, Fox Sports has since mushroomed and today broadcasts huge sporting events – including NFL Football, Major League Baseball, the USGA Championships and FIFA World Cup soccer tournaments.

Indeed, with interest in soccer being at an all-time high, Fox Sports televised and streamed all 52 games of the 2015 FIFA Women’s World Cup tournament in Canada, on the Fox broadcast network – a competition that the US Women’s team won.

Totalling more than 200 hours of programming, record amounts of streamed media and coverage plans that included 4K and 6K shoots, Fox Sports stepped into the next generation of TV and digital media broadcasting with the 2015 FIFA Women’s World Cup.

Tying together the technical operations from six stadiums across Canada for the tournament was one challenge, and processing 250,000 individual files, amounting to more than 500 TB of media for efficient editorial workflow, was quite another.

“There were a lot of moving parts to this operation,” says Kevin Callahan, director of remote operations for Fox Sports. “Many of our production staff had no idea of the size and complexity of what went on behind-the-scenes, and that was our goal. We wanted a set-up where they could click on an asset, view a proxy and their content could get from wherever it was, to wherever it needed to go. The Devil’s Advocate played an integral role in delivering that extreme level of high-end productivity for us.”

“Super-computing in sports production? Who’d have thought that? But it absolutely works, and there’s a whole lot more we can get out of it in the future too.”

Kevin Callahan, director technical operations, Fox Sports
Give us a little background about you and your work at Fox Sports?
KC: I wear two hats that overlap. I’m technical director for all of Fox Sports’ FIFA soccer properties, and I am also director of technical engineering for Fox Sports’ remote operations. Essentially, everything that goes on in the field falls under my purview – such as the FIFA Women’s World Cup (2015 & 2019), FIFA World Cup (2018, 2022 & 2026) and the FIFA Confederations Cup (2017 & 2021). Soccer is growing in popularity and we produced 200 hours of programming for the FIFA Women’s World Cup 2015 alone. Planning ahead of time and making sure our SD, HD and UHD workflow processes are as fast and efficient as possible are of vital importance.

When did you first discover Devil & Demon technology?
KC: I first saw Silverdraft’s super-computing rig in LA a few years ago, and recognized that it was something that might be useful to us down the line. I reconnected with Silverdraft at NAB 2015 and was blown away by their demo. With the super-computing technology packaged down into Devils and Demons, and the ability to playback formats such as 6K RED footage in realtime - with only one GPU, I realized it might prove very useful to us for the FIFA Women’s World Cup.

What was your set-up for the FIFA Women’s World Cup 2015?
KC: Overall it was a huge undertaking because it was the first time that every FIFA Women’s World Cup match was aired live in the US, with 52 matches over 30 days. Within this task, our producers also wanted to shoot a host of additional materials – sit-down interviews with players/coaches, plus scenes of the different host cities – for different highlight packages. And they wanted to deploy some of the very latest 4K and 6K high-resolution digital cinematography cameras shooting RAW – including RED Epic, RED Dragon, Sony F55s and Sony A7s. These RAW high-res formats have large files to manage, and you can’t edit with them. The challenge was to rapidly transcode the RAW footage to the formats that the editors needed. We realised we would need something special for this. Silverdraft seemed like a good choice. At the time, we were in a place where we needed help fast and they could deliver fast. So we went with a Devil’s Advocate.

How did you use the Devil’s Advocate?
KC: We deployed one of their Devil’s Advocate compact super-computers to accelerate the transcoding of the different media deliverables from the RAW footage that was shot, and to transfer those deliverables to editorial across private networks to our editors in Vancouver and Los Angeles.

We loaded the Devil’s Advocate with Telestream Vantage – to transcode to AVCIntra 100 1080i mezzanine format for editing Adobe Premier, plus a 720p 2Mbit DVC proxy, – and FileCatalyst for the accelerated file transfers, with hooks from the Pronology MAM system to manage the assets, and dual Avid ISIS 5500s for storage.

At the very start, the Devil’s Advocate had what you might call a baptism of fire. During pre-production we amassed a massive backlog of RAW, high-res materials that needed processing very quickly for the program producers. I estimate that it might have taken four days of solid processing work using other systems, but using the Devil’s Advocate we had the whole backlog cleared within 24 hours. Which was quite astonishing and also reassuring. We used the system for the rest of the time in production, and never faced that problem again.

What are your thoughts about the Devil’s Advocate’s performance?
We were blown away. After the first tough workout day processing the backlog, the system operated at 5% during the mainstay of the production. I don’t think we remotely taxed the Mini, and saw that we could have thrown a lot more tasks at it. However, we wanted to keep it stable and watch how it performed during the duration of the production. It’s extremely fast and it worked seamlessly, perfectly, without any hiccups.

To have this huge amount of computing power at our disposal, in a small form factor, is tremendous. It’s like a Swiss Army knife. The File Catalyst and Telestream software worked straight away and the Devil’s Advocate integrated with the Avid ISIS 5500s we had on the show, delivering proxy and mezzanine formats for editorial really fast.

How was your overall experience?
We were very happy, wished that we’d used it before, and will definitely use it again. I can see the Devil’s Advocate easily becoming part of our standard kit for marquee events moving forward. Along with transcoding for editorial, we can also harness its power for rendering graphics. We are now including Devil and Demon technology in our planning for the 2017 FIFA Confederations Cup and the 2018 FIFA World Cup, and will be making sure we get the most that we possibly can from those machines.

Would you recommend Devil and Demon technology for similar productions?
KC: Super-computing in sports production? Who’d have thought that? But it absolutely works, and there’s a whole lot more we can get out of it in the future too. Now that we know all the performance benefits and speed advantages we can gain we can’t go backwards.

We are looking to make Devil and Demon super computing part of our typical technology deployment from here on, and yes, I would certainly recommend it.