



University of Notre Dame Speeds Fighting Irish game Highlights to Fans with Telestream



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- **Scott Rinehart, lead technologist for Fighting Irish Digital Media**

How Telestream Pipeline and Vantage accelerate, streamline, and automate the post process

With the excitement of an undefeated 2012 regular season and the 2013 BCS National Championship appearance, interest in the Fighting Irish of Notre Dame has reached a fever pitch. And fascination in the team is a global phenomenon.

While NBC carried Fighting Irish 2012 football games live, and other national networks regularly reported on the team, fans wanted to experience being there—at Notre Dame Stadium on the campus of the University of Notre Dame, in South Bend, Indiana. By watching video clips on the Notre Dame Athletics channel on YouTube, they were able to see game highlights, sideline action, as well as cheerleaders and spectators in the 80,795-seat stadium.

Game highlights on demand

Notre Dame’s YouTube channel (accessible from www.und.com) gives Fighting Irish fans something they can’t get anywhere else—exclusive interviews and VIP access to Fighting Irish players, coaches, and restricted areas like the locker room.

“Our fans want a unique behind-the-scenes perspective. So while interest is still very strong following a game, we want to get game highlights out there fast, especially if it was an exciting win,” said Scott Rinehart, lead technologist

for Fighting Irish Digital Media at the University of Notre Dame.

“While it used to take us two to three hours to get video highlights up on YouTube following a game, this year we can have them ready for fans in just 20 minutes following the game, and that’s a huge improvement,” said Rinehart.

The enabling technology behind this accelerated workflow is actually a pair of systems from Telestream: the Pipeline HD Dual network video capture and playout device, and the Vantage Transcode Pro workflow solution.

When they were installed in the Fighting Irish Digital Media Center in September 2012, Telestream Pipeline HD and Vantage dramatically streamlined and accelerated the game highlights post-production process.

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“During the 2012 games, we brought in a live HD-SDI program feed from NBC’s broadcast truck over a fiber link into one of our eight channels of Pipeline HD, which captured it as Apple ProRes files directly into our SAN. While the content was being captured, our editors started their edits and put highlights right onto the timeline—ready to be sent to YouTube—as the live event was still happening,” Rinehart said. “Being able to start editing the feed immediately at the kick-off saved us tons of time and has been a huge improvement for us.”

Faster, better workflow

Last season, prior to the arrival of Pipeline HD, the Fighting Irish Digital Media Center’s four editors were situated in different locations on campus, not centralized in Notre Dame’s new, all-digital facility that opened at the start of the 2012 football season. Since they had to wait for the first half of the game to be recorded onto P2 cards, they couldn’t begin editing highlights until the third or fourth quarter.



Fighting Irish digital media control room

Once P2 cards were run over to them at half-time, the editors would insert them into P2 card readers and perform log-and-transfer of that content into their laptops before starting to edit it. They also couldn’t share the media easily with other editors.

“To improve our file-based workflow, we had to take this time-consuming, laborious process off our laptops and move it to beefier hardware,” Rinehart said. “By applying high-performance processing and automating the tasks, Vantage has significantly streamlined our file-based workflow and made it much faster and more efficient.”

This season, while the NBC program feed came into Pipeline HD directly—from the network’s broadcast truck televising the game at the stadium next door—additional content for home games still arrived on P2 cards. Notre Dame Athletics positioned three or four Panasonic P2 HD cameras around the stadium so cameramen could capture game-day ambiance to give viewers a sense of what it was like to be there.

Customized, automated operation

When P2 cards were put into the readers at half-time, Vantage saw them and automatically transcoded them into the ProRes format and delivered them to the facility’s Active Storage SAN (storage area network) where they were immediately available for editing. When finished editing, the editors put their ProRes files into a Vantage drop folder and Vantage automatically picked them up from there, converted them into the file format needed for distribution, and placed them on the SAN

for upload to YouTube. Some media files were also uploaded for viewing on demand from Notre Dame's website www.und.com

"The whole file conforming process now requires very little intervention because the intelligence built into the Vantage workflow automatically knows what needs to be done and just does it. This simplifies an otherwise complicated process," Rinehart said. "Since at times our editors are students, it's critically important that we get them acclimated to our file-based workflow as quickly and easily as possible."

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All of the user preferences, such as the file formats to transcode, where to find the files, and where to deliver them, were all set up in advance when Vantage was installed. The operators never need to access any menus or settings to do their work. With Ethernet and fiber optic input/output interfaces, both Pipeline HD and Vantage are seamlessly connected to the facility's high-performance fiber network and SAN. Rinehart says that both Telestream systems perform dependably and preserve picture quality throughout the post-production chain. Rinehart said, "Vantage is speeding up the process of getting files out to YouTube."

Covering all Notre Dame sports

While much of the focus is on Notre Dame's legendary football program, the Fighting Irish Digital Media Center also covers the University's 25 other varsity athletic teams, including men's and women's basketball, hockey, soccer, swimming, and lacrosse. Post-game highlights of these sports are also put up on the Notre Dame Athletics YouTube channel.

Whenever broadcast networks like ESPN, NBC, or NBC Sports Channel are carrying Notre Dame athletic events live, the Fighting Irish Digital Media Center feeds the HD-SDI program out from their broadcast trucks into Pipeline HD. They can also feed any live off/air or backhauled signals into available Pipeline HD channels.

If no network is televising the event, Fighting Irish Digital Media sends cameramen to the venue (for most home games), and produces a live webcast of the event via Notre Dame's website using their cameras, switcher, and streaming media resources. This live stream is also ingested into the Pipeline HD workflow so that footage is immediately available for editing in the ProRes format at the start of the event. Notre Dame's Fighting Irish Digital Media Center produces approximately 150 webcasts per year of a variety of athletic and special events as a free service for fans at www.und.com.

"Telestream products are helping us tell Notre Dame's story more efficiently," said Dan Skendzel, director of digital media at the University of Notre Dame. "We have big plans for digital content production and distribution but a limited set of resources. We have to find and utilize every technological advantage we can to be more productive. The Telestream workflow is a great example of that."

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To learn more

To get more information about Telestream or products mentioned, call 1-530-470-1300, or visit www.telestream.net

