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# Turner Studios Moves to New Vantage Point

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**- Ken Brady, VP of Systems Technology and Digital Media for Turner Studios.**

Turner Studios, the Atlanta-based production arm of cable programming powerhouse Turner Entertainment Networks, is a busy place. The facility creates programming and promotions for TNT, TBS, The Cartoon Network, Turner Classic Movies and Turner Sports, producing in 2011 about 2700 live hours from its studios as well as 500 hours of remote coverage for sports such as NCAA basketball, NASCAR, the PGA Tour, and the NBA.

“It’s a big combination of true live production and a standard post-production facility, including effects and 2D and 3D animation,” says Ken Brady, VP of Systems Technology and Digital Media for Turner Studios. “It’s an all-in-one shop.”

Turner Studios also provides encoding and delivery for Turner content that is offered for electronic sell-through via providers like Apple’s iTunes and Microsoft Xbox, as well as DVD and Blu-ray authoring of home video titles for several Turner properties. And it converts a large amount of Turner content to other formats like PAL for international distribution. In fact, Brady can’t think of a video format Turner Studios doesn’t support.

“Since we are doing heavy graphics and post production, we’re supporting every camera format, from professional to consumer-based down to iPhones,” he says. “Outgoing, we have every major format to every major distributor, from full broadcast-level files down to handheld and mobile.”

Turner Studios works with a variety of mezzanine formats in-house. They range from 50 megabit-per-second MPEG-2 to various flavors of Apple ProRes for post-production work. It also handles a fair amount of Avid DNxHD and Red and ARRI RAW.

For most encoding work, there's not much upconversion, as Turner Studios primarily deals with HD masters. More typically, it needs to downconvert, making center-cut SD from an HD master, or perform format conversion, such as going from 1080i at 59.94 to PAL.

Not surprisingly, transcoding technology has been a major area of investment. Turner Studios has been a longtime customer of Telestream, and has eight nodes of its popular Agility transcoding software arranged in a cluster for entertainment and sports applications. It also has similar-size installations of other transcoding tools from both Telestream and other vendors.

To reduce the complexity of preparing video for distribution in myriad formats and across distribution platforms, Turner Studios has decided to migrate much of its transcoding from Agility to Telestream's newer Vantage product, which is based on its flagship FlipFactory transcoding software.

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Telestream Vantage is designed to be not just a transcoder, but instead a comprehensive workflow design, automation and management tool that can direct a range of video and audio processing tasks, using either Telestream video processing tools or third-party software and hardware. Vantage combines media capture, transcoding, clip management, analysis, decision-making and metadata processing into one workflow framework, and it integrates with all the major broadcast servers, edit systems, streaming servers, cable VOD [video on demand] servers and storage area networks [SANs]. One of Turner Studios' goals is to unify its content-processing systems and reduce the number of discreet workflows that its production and post-production staff have to contend with. The newer Vantage product offers this flexibility.

“This group has a lot of interesting problems, and a lot of variations,” notes Jim Duval, director of new products and strategy for Telestream. “They are constantly designing new workflows as things change on the fly for them. There is also a very high volume of content, so they really can't afford to be making major changes to the environment. It's a big deal for them to go from their Agility infrastructure to something else, and there are a number of new things that they want to implement as they go through the process.”

A big draw of Vantage for Turner was that its analysis and decision-making tools [Vantage Analysis] are powerful enough to evaluate a piece of content and then automatically direct a workflow, such as changing HD content to SD for Web distribution or performing format conversion for international distribution.

“There are ways to analyze content in order to make real-time decisions and change the workflow process,” says Duval. “You can submit any content, and Vantage will analyze it to determine whether it's HD or SD content and choose the most appropriate workflow. If you need frame-rate conversion from 25 to 29.97, that too can be done automatically.”

Vantage's user interface is a visual programming language, Vantage Workflow Portal, which allows customers to create their own workflow design to best meet their needs. That built-in customization is a key benefit for Turner Studios, which has ever-changing requirements due to new productions, new relationships, and new formats.

In 2011 Turner Sports first partnered with broadcast network CBS in televising the NCAA Men's Basketball Tournament, aka “March Madness”. In fall 2010, Turner began preparing for the 2011 tournament coverage, which would include live coverage across various Turner Networks as well as a dedicated Website and apps with live streaming. An early focus for Brady and his team was improving Turner Studios' content preparation processes for sharing of promotions between the various networks involved. These needs spurred Turner Studios to install its first Telestream Vantage node.

“At the time we were still doing all the work in a manual fashion, and we had a lot of different encoding systems in place from different vendors,” says Brady.

“It was becoming rather burdensome, the management and engineering support you needed to have to make sure all the systems were running in harmony and passing one thing to the next. We were dropping things in watch folders, and it was becoming untenable to do that in a long-term fashion, particularly with the uptick in production for the NCAA tournament. We decided to begin to consolidate all the systems as much as possible, and even more so to consolidate all the processes around our systems for transcoding.”

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Turner Studios purchased a single node of Telestream Vantage in January 2011, and initially used the system in late February 2011 to transfer promotional content between Turner and CBS in New York. Brady and his team quickly realized the power of Vantage, particularly how the system’s workflow automation could consolidate a number of different processes into a single job.

“When we moved that job to Vantage, 15 different [transcoding] profiles were combined into one,” says Brady. “The weekend before Monday air, we encoded and transferred over 200 promos to CBS through the Vantage system. That included performing ITU. BS-1770 loudness correction, which is automated through Vantage.”

After Vantage’s successful use during March Madness, Turner Studios wanted to pursue a broader implementation of the system. In June 2011, it started a gradual process with Telestream engineers to put Anystream Agility under the control of Vantage.

“We would no longer use Anystream Enterprise Control [the Agility control software], but we wouldn’t have to throw away any of the Agility systems,” says Brady. “Instead, we would begin by migrating and consolidating the workflows. That has progressed from last June to where we hope to be at the point this summer or fall where we will shut down Agility and be completely Vantage. That’s a combination of Te-

lestream engineers engineering pieces of Agility into Vantage, and us becoming more familiar with the system.”

Turner Studios’ Vantage migration is progressing quickly, and Brady estimates that “75% of everything we do” is either controlled by Vantage or encoded by Vantage. There are a few Agility workflows that still need to be turned into Vantage, and the server nodes that are currently running Agility could also be transferred to the new system. According to Brady, there are three things about Vantage that make it easier to migrate to the system.

“One is the workflow engine,” he says. “The second is the analysis tool. It’s not just analysis of what the content is, but the ability to use the analysis to make an automated decision about where to go next. The third is openness. Vantage is able to tie into most of the different third-party systems we have. We don’t have single-vendor solutions, we’re too big. But if we want to tie it into that heavy QC [quality control] and automated delivery you get with Vantage, those things are made easier.”

**“When Turner began the migration in July 2011 it had literally thousands of... workflows...that number has been reduced to hundreds of Vantage workflows today.”**

The system has consolidated and automated multiple content-preparation processes for Turner Studios, greatly reducing the number of transcoding profiles as result. When Turner began the migration in July 2011 it had literally thousands of separate Agility workflows. That number has been reduced to hundreds of Vantage workflows today.

“You can do so much more through Vantage,” says Brady. “Like dealing with original aspect ratios for Turner Classic Movies, for example. Previously, each [type of] letterbox would be a different setup in Agility. So what’s one workflow in Vantage would previously be closer to 20 in Agility. There’s an analysis tool in the

workflow engine that looks at that. When we started to see thousands of workflows get shifted into Vantage, that's when we started to really cut them down. The existing number of profiles would be divided by five or six. From a manageability standpoint, it's much easier to keep up with the workflow."

As the first major Agility customer to migrate to Vantage, Turner Studios has formed a partnership with Telestream in which it gives feedback on what new features it needs and Telestream engineers work quickly to implement them in Vantage. Brady emphasizes that Turner Studios isn't buying a customized version of Vantage, but is instead just taking advantage of the flexible workflow design that's already built into the system.

**"With Vantage, you don't have to throw away everything you had. You haven't just purchased another encoding system, you've purchased a central workflow tool for your facility."**

"Everything we do in Vantage is built into Vantage; there's no customization that has been done specifically for just Turner," he says. "We have one primary specialist at Turner that builds the workflows, and everything else that we do just uses the tools in the Vantage system. We do have a partnership with Telestream to make sure that the capabilities we needed were being built in to Vantage. If there's something missing [that we had with Agility], we bring it to their attention and they bring it to Vantage. Their release schedule is very short, and we have been able to progress in that fashion. But they are not running a custom build or building 'Vantage.Turner.'"

Kim Outlaw, Telestream's director of client services for enterprise products, says the dialogue with Turner Studios benefits the vendor as much as the customer.

"We're working side by side, and with the partnership we have formed we'll know how to help other large customers going forward," says Outlaw.

An important part of the process, says Outlaw, has been to dive deeper than the overall migration strategy and look at Turner's requirements "a little more tactically," such as breaking down the overall workflow that Turner had been using to convert HD video to PAL and how that would change with Vantage.

"When we started to tackle things at that level, it was very advantageous," she says.

Moving to Vantage has helped Turner Studios begin migrating from its previous "watch-folder mentality," says Brady, where for every job a new watch folder and new profile were created.

"From an editorial point of view, it's become easier because you're able now to automate the entire job," he says. "When you drop something into Vantage, it not only will drop back out, but it's also gone through QC [quality control] and will also be delivered to the end point. So it's started to become easier in-suite. When thinking about that final file encode and delivery for long-form programming, we're looking at how to make it easier to pass through with less editorial hands on. Vantage will be one of the central pieces of this delivery."

For example, Brady has been looking at different tools to perform PAL conversion from domestic masters with built-in QC, which has represented a particular challenge for international distribution.

For other media companies considering a move to Vantage, the ability to repurpose existing gear and gradually convert workflows is the key point, he adds.

"That was crucial. If we had to turn off everything [to make the switch], we couldn't have maintained the level of service we are used to delivering to our customers. With Vantage, you don't have to throw away everything you had. You haven't just purchased another encoding system, you've purchased a central workflow tool for your facility."

