BYU-Idaho Enriches Academic Environment with Telestream Vantage

How Bringham Young University-Idaho boosts productivity and enhances the learning experience with video processing by Telestream Vantage Transcode and Lightspeed Server

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Video Production Coordinator
for BYU-Idaho**

Rexburg, Idaho

Brigham Young University-Idaho in Rexburg is the largest private university in the state, educating over 15,000 students per semester and offering close to 80 bachelor's degrees.

Founded in 1888, BYU-Idaho has a tradition of academic excellence and inspiring leadership in its students. While its century-old mission remains the same, what has changed is BYU-Idaho's extensive use of video–including tutorials, lectures and course materials–to support and enrich the learning experience.

Today, BYU-Idaho has a massive media library that continually expands with new faculty-produced videos. With the help of Telestream's Vantage Transcode solution, these video files are rapidly formatted for online distribution. BYU-Idaho students and professors can access and view the video files on their PCs and mobile devices whenever and wherever they wish.

"In just the last year alone, we've uploaded 13,000 video assets to our online network and the volume of files to be processed is increasing all the time," said Michael Jeffs, Video Production Coordinator for BYU-Idaho. "All of these video assets need to be converted to the right file formats for upload while making sure they look pretty and everyone can use them."

"That's what Vantage helps us do," Jeffs said. "There's no way we'd be able to get 13,000 assets up in a year's time without all of the automation that Vantage is doing for us. Vantage is increasing our productivity and helping us scale up our operation as our media library grows."

Located on campus in the Spencer W. Kimball Administration Building, BYU-Idaho installed two Telestream Vantage Transcode systems in its video production facility about a year and a half ago. Each is paired with a Telestream Lightspeed server, which provides GPU-accelerated video processing.

Telestream Lightspeed servers at work

Each Vantage Transcode system is also equipped with Telestream's Vantage Analysis software, which extends its inherent ability to analyze files for more efficient processing and performance.

In the current configuration, each of the Vantage systems automatically picks up the media assets to be processed from a watch folder on a networked server. After analyzing each asset, Vantage determines the best way to do the work that needs to be done, such as compressing the video file to an optimal bit rate for online delivery. If it's just a one to two minute clip, the bit rate may be increased for higher quality video, whereas a 1.5-hour program might be highly compressed for more efficient online delivery.

As part of its automated video workflow, the Vantage Transcode system applies corrections that address issues related to incompatible resolutions, frame rates, aspect ratios, and other technical parameters. It also chooses one of the more than 70 different workflows–

set-up early on by the BYU-Idaho team–applying whichever offers the best method of preparing the file for its intended application.

Since professors and others associated with the University produce the content using all types of video production gear, BYU-Idaho's video department deals with a wide range of incoming formats, including Windows Media, AVI, or DNxHD. All of this source material needs to be transcoded to the H.264 MPEG-4 format required for online distribution. Even files already in the MPEG-4 format can benefit from Vantage processing.

With respect to BYU-Idaho's academic videos, the biology department may require different file formatting than the math department. And in special circumstances, such as the weekly TV shows that BYU-Idaho produces for broadcast on BYU-TV–Brigham Young University's national cable/satellite channel–the format for FTP delivery must be XDCAM-HD/50 with audio on certain channels.

When the transcoding is finished, Vantage outputs the files into a watch folder for upload to Kaltura, the content delivery network (CDN) used by BYU-Idaho for most of its online media distribution needs.

Kaltura automatically grabs the file from that server, and then sends an email to the video production team with the links and embed codes needed to make it accessible to everyone. Ultimately, the educational content resides in BrainHoney, BYU-Idaho's password-protected LMS [Library Management System] where it's ready to play out on demand.

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During classes, the professors tell their students which videos to watch for homework or to prepare for the next class. Jeffs says that video makes it easier to convey complex concepts and information because students can view it on their personal devices as many times as they like.

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Reinan Lima, a student working in BYU Idaho's media transfer department, monitors Vantage workflows and processed files.

When BYU-Idaho decided to automate its transcoding over a year ago, the Telestream Vantage product was a logical choice because of the favorable experience it had had for years with Telestream's desktop transcoder, Episode.

BYU-Idaho also has two dual-channel Telestream Pipeline network-based video capture and ingest systems. These are primarily used to capture video programs contained on videotape and convert them to files for today's file-based workflow. Also, all of the

Telestream systems interface seamlessly with Avid media asset management and storage systems. And Vantage plays a role in creating low-res proxies of all of the University's archival video so that people can search for the historical assets they want to restore and use.

"Since Vantage is doing a lot of the heavy lifting around here, we're definitely saving time and boosting productivity," Jeffs said. "In fact, I would say that Vantage is paying out dividends that will only compound in the future."