Tektronix Introduces World's First Automated Verification System for File-Based Digital Video Content

Leading Companies Worldwide Including FOXTEL and Turner Broadcasting Select Cerify to Fully Test All Aspects of Compressed Content to Ensure Quality

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Tektronix, Inc. , a leading worldwide provider of test, measurement and monitoring instrumentation, announced Cerify, the world's first fully automated system capable of verifying the quality of file-based, compressed digital video and audio content prior to transmission or use. Compressed digital content is complex and can use different standards, resolutions, formats and metadata that must be accurately specified and encoded if the content is going to reach the end-viewer and be played correctly. With Cerify, the broadcaster knows the content is correct before it is transmitted, ensuring higher levels of end-customer viewing satisfaction.

In the midst of a rapid transition from tape to digital ingest and server- based storage, broadcasters are faced with a wide variety of technical challenges and changes in workflow. Complicating the process are continual updates in technology prompted by new digital codecs and formats including MPEG-4/AVC and VC-1 to support IPTV and handheld applications, and high bit rate MPEG-2 for digital cinema applications. Regardless of the codec or format being used, maintaining content quality and consistency is critical for commercial success. Tektronix Cerify is the only product that fully tests all aspects of stored compressed video and audio quality to ensure it meets the system parameters, formats, resolutions, bit-rates, video/audio quality levels and compliance/correctness to a wide-range of specified video and audio standards.

"We have built a facility that stores content as files and utilizes a file transfer infrastructure," said Clyde Smith, Senior Vice President of Engineering, Turner Broadcasting. "Automated QC is essential to maintain the high quality level of our feeds and keep operating costs reasonable. Using conventional test equipment that requires the files to be taken back to baseband, not only lowers quality but does not test all aspects of the material that need to be checked. In order to satisfy our customers' needs, we feel it is important to be thorough and consistent in checking the quality and transmission parameters of all levels of content from baseband through transport streams. Tektronix Cerify is a real help with this endeavor."

"With all of the different content formats and parameters, today's broadcasters are increasingly challenged to perform the necessary quality checks to ensure a consistent viewer experience," said Todd Biddle, Vice President, Video Product Line, Tektronix. "Human visual and audio checking is often used for quality assurance of digital content. This is not only inconsistent and expensive requiring teams of QA personnel, but this approach also checks only a fraction of the transmission parameters. Cerify provides the world's first automated system capable of performing consistent and thorough checks of incoming files against user-defined quality templates. With Cerify from Tektronix, broadcasters can be assured that content adheres to their standards for quality."

Playout centers, broadcasters and network operators increasingly obtain content in compressed format on digital media or through data-links from a variety of sources including content providers, post production, network distribution centers, news feeds, and sports feeds. The media files may be produced by different companies using different systems, and the broadcaster must ensure that the files are in the correct format and meet their specification prior to transmission.

For example, a broadcaster may require three seconds of black and audio tone at the start, or want a

maximum bit-rate of 6 Mbits/sec. There are literally hundreds of such parameters that need to be checked including video format, audio format, video and audio resolution, compliance to encoding standards, video quality, audio levels, video and audio bit-rates (peak and average, fixed or variable), and metadata. Cerify can automatically check all of these, providing a repeatable, reliable, objective and cost-effective testing methodology.

Cerify tests media files against user-defined templates for the video, audio and system components. Different priority levels can be assigned to determine when the testing is to be conducted depending upon when the content is to be broadcast. Cerify logs errors as the content is checked, can move suspect content to a "quarantine server" and can send e-mail alerts of errors to users and content encoders. The error notification explicitly describes the error and error location as well as provides images of the errant video frames/audio waveform with the error area highlighted.

Cerify is applicable not only to traditional broadcasters and network operators but also to content providers including movie, TV, video and streaming media companies, for post-production checking of encoding, and to video archives providing an easy way to analyze and check the integrity of the content of the digital video archives.

Controlled via a standard web-browser interface, the Tektronix Cerify system comprises one or more rack-mounted media test units. Multiple Cerify Media Test Units are controlled by a Cerify Controller and are used on a network, providing enhanced throughput for multiple content channels, load balancing, and automatic re-distribution in the event of failure of any component. Cerify works with almost all video standards and formats including SD, HD (720p, 1080i/p), 24 fps, NTSC, PAL, SECAM, encoded in MPEG-2, H.264/AVC, MPEG-4, VC-1 or H.263 video format with MPEG-2, AAC, AACplus, HE AAC or AC3 audio. A "CeriTalk" application programming interface (API) is under development for integration of Cerify with broadcast automation systems.

Cerify is available in various configurations, including the CYC100 for single-unit installations and the CYS100 plus CYM100 for Cerify solutions including enhanced throughput for multiple content channels, load re-distribution and automatic redundancy in network "cluster" configurations.

About Tektronix

Tektronix, Inc. is a test, measurement, and monitoring company providing measurement solutions to the communications, computer, and semiconductor industries worldwide. With 60 years of experience, Tektronix enables its customers to design, build, deploy, and manage next-generation global communications networks and advanced technologies. Headquartered in Beaverton, Oregon, Tektronix has operations in 19 countries worldwide. Tektronix' Web address is www.tektronix.com.

SOURCE: Tektronix, Inc.

CONTACT: Amy Higgins of Tektronix, Inc., +1-503-627-6497, or amy.l.higgins@tektonix.com

Web site: http://www.tektronix.com/
