



Fuji Television Network, Inc. Installs Cerify Video Content Verification System in its New Master Facilities, Automating the Verification of Broadcast Materials

Overview

May 2009

Challenges

- Since broadcast materials had to be visually checked via tape media, the checking schedule depended on the length of time required for playback of the tape.
- In order to switch to a system allowing file-based broadcast operations, equipment capable of verifying file-based materials was required.

Solution

- With Tektronix Cerify (an automatic verification system for video content) installed, it is no longer necessary to visually check the full length of file-based broadcast materials.

Results

- Automating the technical check has provided much greater flexibility in the working schedule.
- Quality degradation and errors not easily found with the human eye can now be detected by Cerify.



Cerify, an automated video content verification system

Supporting the Next Generation of Broadcast Materials

Fuji Television Network, Inc. completely updated the infrastructure of its broadcasting station, the system used in the master control room (master facilities), and brought a new system into operation on December 1, 2008. Broadcast materials, such as television programs and commercial messages (CM), are monitored at the master facilities before being sent to transmission facilities.

These new facilities do not consist of just technical equipment. With the appropriate specifications developed, they have been introduced as the strategic facilities on which Fuji Television Network's future hinges. The new and old facilities differ the most in their delivery forms for television programs. Traditionally, most broadcast materials have been delivered via tape media. Even programs created with non-linear editing were recorded onto tapes.

However, Fuji Television Network has estimated that there is a greater possibility that broadcast materials will be delivered in file format in the future, as non-linear editing has been gaining popularity. Due to this, the new master facilities were designed as a system to fully handle file-based broadcast materials. They, of course, can also accept deliveries via

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traditional tape media and convert them into file format for loading into the system.

Verifying Broadcast Materials

Handling file based broadcast materials has released the distribution of files from the limitation of real-time based distribution. The length of time required for distribution can now be controlled based on the performance and cost of the system. For example, when a low-cost system is needed, files can be sent and received at a low speed. That is, by making the system file-based, you can migrate from an actual-time-based working process to a system that optimally allocates your human resources.

For this purpose, a mechanism for checking the video and audio content of file-based broadcast materials was required. "What workflow enables us to verify the files without them being handed over physically? We wanted a next-generation verification system that could be used even with materials delivered in file format," said Mr. Ito.

At traditional master facilities an operation called full-length preview, in which an expert plays and views broadcast materials to check their content and technical requirements, was necessary. For example, a one-hour program required a full hour for playback and checking.

Under this system, Fuji Television Network was previewing its materials twice each, once during the production check to verify the content of a program, and also during the technical check to verify its technical quality. When it installed its new file-based master facilities, the company automated the technical check and limited full-length previewing to the production check, streamlining its checking process and saving labor.

Tektronix Cerify was chosen as the automated verification system for technical checking. Cerify can verify file-based broadcast materials (compressed files) and issue an error or warning if any abnormalities are detected freeing up technical checkers to manually play and check only certain parts of the material as needed.

When Fuji Television Network was considering the installation of an automatic verification system for its broadcast materials, many systems were available on the market. After carefully considering their expectations for features such as technical checking, checking speed, cost, and possible improvements in performance, they selected Cerify based on a comprehensive evaluation of available systems.

Performing 'No-omission' Checking

To date, a total of 10 Cerify systems have been installed at Fuji Television Network. Since a single Cerify system can check up to four broadcast files simultaneously, 40 files can be verified automatically in parallel. Cerify checks files created from tape media, as well as files submitted directly. While broadcast

files can come in a wide variety of formats, Fuji Television Network selected a wrapping format, MXF, as its exchange format, since it can be used even in the future. They built a flash-type program transmission system that sends MXF files natively.

Installing Cerify automated the technical checking of broadcast materials, enabling a reduction in human resources needed for technical checking. Cerify can check not only for black screens and muting in broadcast files, but also for syntax errors, which are not easily recognizable by the human eye, and automatically detects sections that do not meet delivery standards or can cause failed playback. Unlike manual checkers, the system has the advantage of consistency in its checking quality.



10 Cerify systems installed in the master control room

Challenge: Faster Checking

While demonstrating excellent performance as an automated verification system, Cerify currently requires a fairly long time to complete verification due to its advanced, 'no-omission' operations. Therefore, Fuji Television Network has been utilizing Cerify's simultaneous, parallel processing capabilities. For instance, they divide a program file into multiple files and process them in parallel, speeding up the checking time for the program. "We feel it necessary to further speed up the system," said Kenji Hayakawa, director of the Technical Department of the Broadcasting Control Center in the Broadcasting Coordination Section, at Fuji Television Network.

In addition, while enabling detailed verification, Cerify sometimes generates errors and warning messages difficult for operators in the field to understand, so some simplified messages had to be prepared and added. Further improvements are expected on such points in the future.