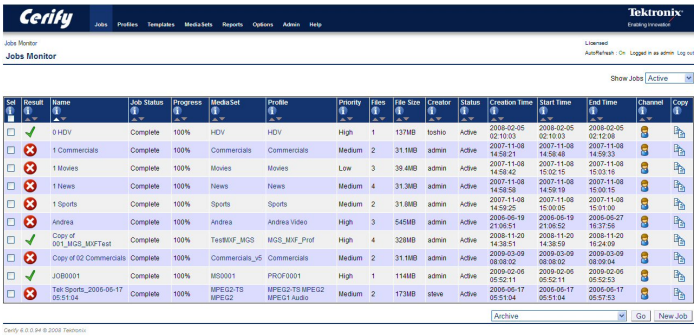
Cerify® - Automated Quality Control of File-based Video

CYSW Data Sheet



Features & Benefits

- Provides Exception-based Technical Compliance to Enable the QC Teams to Focus only on the Problem Content and the Subjective Requirements
- Performs Consistent and Thorough Checks of Incoming Video Files against User-defined Templates
- Integrates with Video Servers
- Logs Errors, Informs Automation Systems, plus Programmable Actions such as E-mail User Alert, Quarantine and Move Files
- XML-based Templates to Reduce Ingest Rejection due to Noncompliance
- Web-based Multiuser Interface
- Flexible Windows Software-only Solution
- All the Test Features of the Cerify 200 Market-leading Auto-QC Product
- ***CeriTalk*** API for Integration with Automation and Asset Management Systems

Tests Include

- Encoding Errors, Syntax Errors, Format, Bit Rate, Quantization, Frame Rate, GOP Length, Aspect Ratio, Color Format, Buffer Analysis, File Size, Correct PID, CableLabs VoD Compliance, Number of Video and Audio Streams, Number of Audio Channels
- Video Playtime, Signal Levels, Gamut, Luminance, Chrominance, Black Frame Detection, Video Quality (Blockiness), Freeze Frame Detection, Field Order
- Audio Playtime, Peak and Minimum Levels, Audio Loss, Clipping, Silence, Mute, Test Tones

Formats

- Format – All Frame Sizes, Bit Rates, and Resolutions for SD/HD and Mixed Workflows
- Container – MPEG TS/PS, MXF, GXF, MP4, QuickTime, ASF (Windows Media), 3GPP
- Video – MPEG-2 (IMX, XDCAM), H.264/AVC, MPEG-4, H.263, VC-1/WMV, DV/DVCPro25/50/100/HD, Apple ProRes 422/422(HQ)/422(Proxy)/422(LT)/444*[1]
- Audio – MPEG-1/2, AAC, HE AAC, PCM (AES, BWF, AIFF, WAV), DV, WMA, Dolby D / AC-3, Dolby E

Applications

- Broadcasters – For checking audio and video after encoding, at ingest, after editing, after transcoding, and before playout for terrestrial, satellite, cable, internet, and video-on-demand content
- Archiving – For checking integrity before and after archiving
- Content Providers – For checking post production and aggregated content has been correctly encoded and conforms to the required quality and format

With Cerify You Can Ensure that Your Content is Ready for Delivery

Quality control of file-based video that may be ingested from different sources and encoded at different bit rates, formats, and compression standards for SD/HD, VOD, and IPTV delivery presents considerable operational challenges. File-based video must be quality checked for:

- **Correct Encoding Syntax**: At the digital level the audio and video must be correctly encoded without errors in accordance with the compression standard, so that it plays out correctly at the customer's STB/playout device
- **Correct Encoding Parameters**: The audio and video bit rates, GOP structure, video color-space, color depth, frame size, frame rate, aspect ratio, and quantization levels must be correct
- **Correct Baseband and Quality Levels**: The analog parameters of signal levels, luma, chroma, gamut, and quality levels of black frames, video quality (blockiness), loss of audio, audio clipping, and video and audio playtime

*[1] There are no syntax checks for the ProRes codecs.

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Manual inspection can playout, watch, and listen but is subjective and cannot look inside the encoding to check that the correct syntax and parameters have been used.

Cerify solves these problems, and can be easily integrated with Automation and Asset Management systems using the ***CeriTalk*** API.

Cerify SW is the functionally equivalent software version of the CYC200, the world's 1st and leading automated system for checking/verifying file-based video content prior to delivery or use.

The XML-based test templates can be exchanged between Cerify systems, and applied as the definition of the required test standards between suppliers and broadcasters to establish Service-level Agreements and reduce costly churn (rework of content).

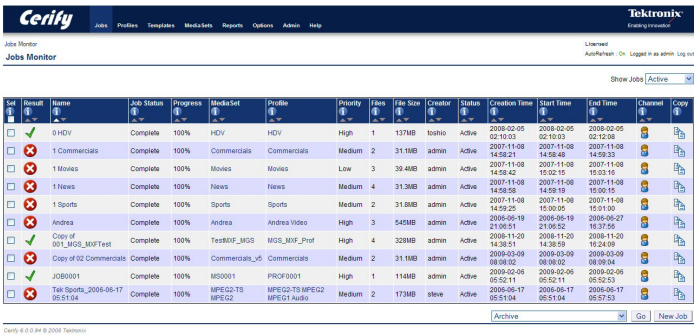
The Cerify Developer Community (CDC) of companies working together on integrated solutions is expanding rapidly and is featured on the Tektronix website.

User Interface

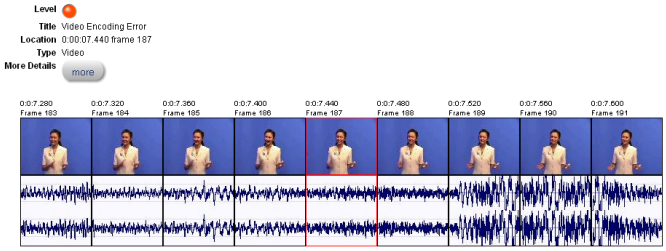
Easy-to-use web browser interface shows job status results at top level as red light / green light

Result	Filename	Size	Status	Progress	Start Time	Poster Frame
	ftp://cerifycontroller/content/news/airport_interview.ts	8.45MB	Complete	100%	2006-06-16 13:08:09.0	
	ftp://cerifycontroller/content/news/beijing_weather_girl.ts	8.03MB	Complete	100%	2006-06-16 13:08:10.0	
	ftp://cerifycontroller/content/news/live_report.ts	8.47MB	Complete	100%	2006-06-16 13:08:33.0	
	ftp://cerifycontroller/content/news/news360.ts	7.88MB	Complete	100%	2006-06-16 13:08:34.0	

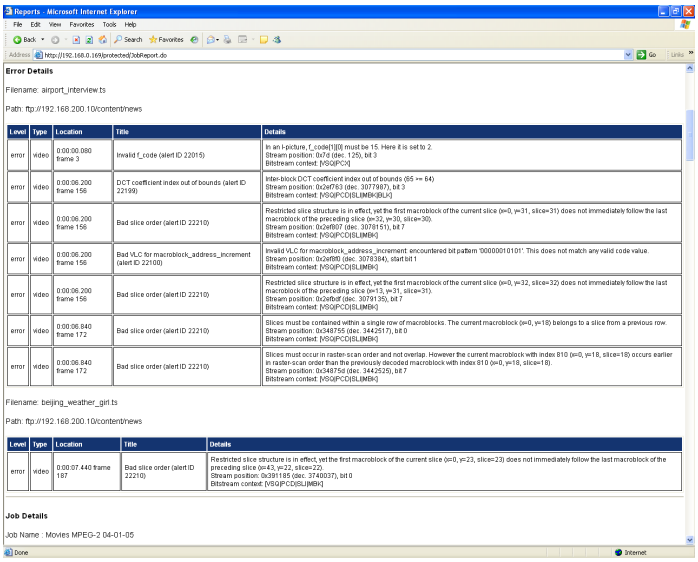
Click to get job details



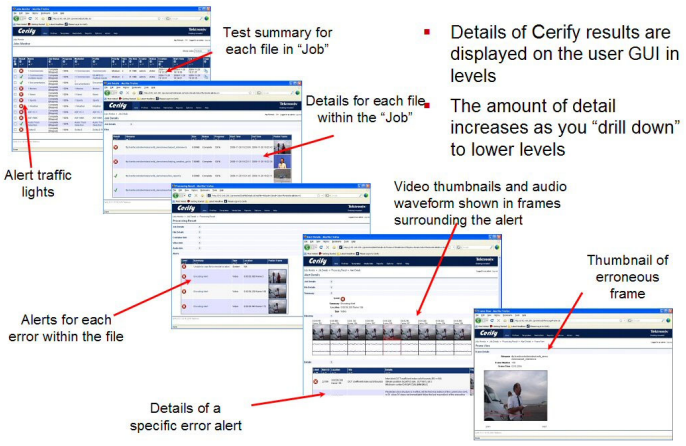
Click to get details of stream errors



Report by job, type, date range, file name, etc.



See and Solve test results



Characteristics

Standards Supported

Format – All frame sizes, bit rates, and resolutions for SD/HD and mixed workflows.
Container – MPEG TS/PS, MXF, GXF, MP4, QuickTime, ASF, 3GPP.
Video – MPEG-2 (IMX, XDCAM), H.264/AVC, MPEG-4, H.263, VC-1/WMV, DV/DVCPro25/50/100/HD, Apple ProRes 422/422(HQ)/422(Proxy)/422(LT)/444.
Audio – MPEG-1/2, AAC, HE AAC, PCM (AES, BWF, AIFF, WAV), DV, WMA, Dolby D / AC-3, Dolby E.

Test Templates and Levels are User-controlled and Include:

- Container-level Transport System Tests
  - Correct Standard and Integrity
  - File size, Bit Rate, Playtime, Number of Video and Audio Streams in Transport Container
  - Packet Size, CableLabs VOD Compliance
  - Signalling of Close Captions, Teletext
- Video Tests
  - Correct Encoding Standard, Profile, and Syntax Checks for Encoding Errors
  - GOP Structure, Quantization, Frame Rate, Bit Rate, Frame Size, Interlaced/Progressive, Aspect Ratio
  - Baseband Tests including Gamut Levels, Luma, Chroma, Signal Levels, Letterbox/Pillarbox, Playtime
  - Color Depth, Color Format (4:2:0, 4:2:2), Copyright
  - Black Frames (Lead in, lead out, and during the video), Video Quality (Blockiness), Frozen Frames, Field Order
- Audio Tests
  - Correct Encoding Standard, Profile, Syntax Checks for Encoding Errors
  - Sample Rate, Bit Rate, Playtime
  - Number of Channels, Peak and Minimum Signal Levels on Each Channel
  - Audio Silence (Lead in, lead out, and during the video), Clipping, Mute, Test Tones
- Action Templates and Reporting
  - Copy or Move File on Success or Error
  - E-mail Alerts with Test Reports
  - Web-based On-screen Job Reports and Detailed Drill-down to Error Details
  - Text/HTML Query Reports of All Files in the Database with Full File
  - Details and Error Reports
- ***CeriTalk*** Automation API
- Multiple User Templates and Profiles can be set up for Different Content Types and Sources
- XML-based Templates can be Imported and Exported
- Automatic Reprocessing of a File, if there is a Change in the Last Modified Time or the Size of the File

System Requirements

For a single channel of Cerify, the minimum requirements are the following, additional memory may be required to support a greater number of channels:

- Windows XP, Vista, 7, Server 2003, or Server 2008
- Processor Speed – 3 GHz
- Memory – 2 GB RAM
- Ports – USB and Ethernet
- Hard Drive – 20 GB available

Ordering Information

Product	Option	Description
CYSW		Cerify single channel software licence for MPEG-2, MPEG-4, H.263 (Baseline), H.264/AVC, VC-1, and DV options
CYSW	CH	An additional single channel software licence for MPEG-2, MPEG-4, H.263 (Baseline), H.264/AVC, VC-1, and DV options. Up to three of these may be used with a single CYSW
CYSW	CHX	An additional single channel software license for MPEG-2, MPEG-4, H.263 (Baseline), H.264/AVC, VC-1, and DV options. For use with more than three CH channels per single CYSW seat
CYSW	ProRes	ProRes Codec
CYSW-SWS		One year of software updates and technical phone support per install of Cerify CYSW

CE

ISO 9001 Product(s) are manufactured in ISO registered facilities.

GPIB IEEE-488 Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

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For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit **www.tektronix.com**

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