Cerify Automated Video Content Verification System
Release Notes for Software Version 7.8.1
077075204

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Contacting Tektronix
Tektronix, Inc.
14150 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, service, and technical support:
In North America, call 1-800-833-9200.
Worldwide, visit www.tektronix.com to find contacts in your area.

Contents:

These release notes provide the following information for the Cerify Automated Video Content Verification System:

- Product documentation that support software version 7.8.1
- General notes relating to software version 7.8.1
- Enhancements available in software version 7.8.1
- Defect fixes included in software version 7.8.1
- General limitations relating to software version 7.8.1

CAUTION. To prevent loss of data in the unlikely event of the database becoming corrupted, it is strongly recommended that you regularly back up the Cerify database. See the Database Backup section of the Cerify User Manual for instructions on how to perform this task.

Product documentation

Cerify user documents that support software version 7.8.1 are

Document: Cerify Quick Start User Manual (English)
Tektronix part number: 071-2680-08
Description: Provides installation instructions, system requirements, concepts of how to operate the software, and basic procedures for common tasks. This is a printed manual and is also available on the product DVD and on the Web at www.tektronix.com/downloads.

Document: Cerify User Manual (English)
Tektronix part number: 077-0352-12
Description: Provides in-depth descriptions of how to operate the software. This is a manual version of the product online help. This PDF-only manual is available on the product DVD and on the Web at www.tektronix.com/downloads.

Document: Cerify Software License Notices (English)
Tektronix part number: 001-1513-01
Description: Provides the Cerify Software License Agreement and also the
licenses of various third party software used in Cerify. This PDF-only manual
is available only on the product DVD.

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Cerify version 7.8.1

General notes

   New features

   This software release includes the following major features:

      - Optimized decoder provided for MPEG-4 SStP (Simple Studio Profile)
        video format.
      - DPP compliance support is added. New section called "DPP Info" is
        displayed under "Processing Result" page.
      - Support for Windows Server 2012.

   Dongle reprogramming

All software versions after v7.2 require an update of the license dongle prior
to being able to use the new version. Please make sure to update your Cerify
license dongle before installing v7.8 as your Cerify system will cease to
operate on v7.8 with the older license dongle until you get the license dongle
updated to v7.8.

Also note, all users with a valid Cerify Annual Software Maintenance contract
are eligible to receive the base features included in this version without any
additional cost.

Licensing for the optional HA (Supervisor high availability functionality) is
an additional cost that is not covered by the Cerify Annual Software Maintenance.
Please call your Tektronix Sales representative if you wish to add HA feature
to your existing Cerify system.

To obtain the license updates needed by your Cerify system to use this new
version, send the c2v file of your Cerify dongle to the following
address: cerify-asm@tek.com.

Cerify demo dongles need to be updated to version 7.8 in order to use the new
features.

Users upgrading from older versions do not need to export and re-import the
Cerify database. The upgrade of the database is performed as part of the
upgrade install except in the case where an existing non-HA version of
Cerify is upgraded to an HA Enterprise cluster option. In this situation,
an in-place upgrade is not available.

Product enhancements

    - Improved Audio/Video Tests

        Cerify v7.8 has had the following improvements made to audio/video
        testing:
        - "CC Presence" test has been added in MPEG-2 and AVC templates to
          check the presence of closed caption conforming to any standard.
        - The sensitivity of the Tape Artifact test has been increased.
        - A new check has been added in MPEG-4 template to select between
          the Standard Reference Decoder and the Optimized Decoder for
          MPEG-4 SStP format.
        - Field Order test and Video Type tests are, now, available with
          the Optimized decoder for AVC and MPEG-2 formats.
        - Test Tone audio quality test in audio template is enhanced to
          support range of frequencies using a tolerance value. Support
          added to detect EBU Line-up tones.
        - "Tone exclusion" in audio loudness measurement in audio template
          and cross-track audio template is enhanced to support range of
          frequencies using a tolerance value.

    - AVC-Intra Improvements
        - Support added to process AVC-Intra/MOV files which don't have
          SPS/PPS details.

    - MXF rewrapping

        MXF rewrapping is supported for following flavors of Sony XDACM files:
        - EVTR
        - XDCAM_DV
        - XDCAM_HD
        - XDCAM_IMX
        - XDCAM_PROXY

    - New Container Tests

        Cerify v7.8 has had the following improvements made to MXF container
        testing:
        - Tests to Check for the presence of all DPP mandatory metadata.
        - Test for "AFD value check".
        - Test for "Shim Version value check".
        - Audio track layout detection during quick check and reporting the
          same in MXF container info.

    - DPP Compliance Checks
        - Digital Production Partnership (DPP) provides the guidelines for
          HD and SD file delivery and specifies MXF metadata, which are
          mandatory to be delivered with the file. Cerify provides a check
          for DPP compliance.

    - DPP Profile
        - A profile is provided for automatic selection of right DPP
          profiles, based on the file parameters.

        NOTE:
          "Microsoft .NET Framework 4.0" should be installed on the Cerify
           system for the DPP application to work. In case of a cluster,
           all nodes should have ".NET Framework".

- Additional stream attributes
    - New MXF stream attributes that are mandatory for DPP compliance
      are reported under a separate section "DPP Info" when "DPP Metadata
      Test" is enabled in the MXF container template.

- Performance improvements
    - Performance optimizations for the freeze frame test.
    - Performance optimizations while processing low resolution AVC files
      with the optimized decoder.
    - Performance Optimizations while processing MPEG-4 Simple Studio
      profile (SStP) files with the Standard Reference Decoder.
    - Performance improvement for file processing over SMB.

- CeriTalk improvements
    - CeriTalk "GetJobs" API is optimized to improve the response time.

- Windows Server 2012
    - Cerify supports
      - Windows Server 2012, 64-bit
      - Windows Server 2012 R2, 64-bit

- Licensing Improvements
    - Improvements in license handling to minimize field dongle
      failures.
    - Cerify need not be restarted after license update.

- Preloaded profiles and templates

    Sample profiles and templates will be preloaded for DPP compliance
    checks during fresh Cerify 7.8 installations. Installer also provides
    the option of loading the sample profiles and templates for DPP
    compliance checks during installer upgrade.

Defect fixes

The following defects have been fixed in software version 7.8:

- Cerify took more time to process low resolution H.264 files with
  the optimized decoder.
- Issue in processing some H.264 files with the standard reference
  decoder.
- In VM, sometimes Cerify was not starting in service mode.
- Processing of some MXF files was stuck at 99%.
- Missing blockiness alert issue related to UI quality threshold.
- Vertical dropout artifacts were not detected by Cerify in some
  files.
- Rewrapped XDCAM file, after ALC, was not viewable in the Sony XDCAM
  browser.
- Audio Video Duration Mismatch.
- Cerify took long time to process a 5 minute MPEG-2 file with
  the optimized decoder.
- Cerify was not able to process some MP4 files with AVC video in
  which SPS/PPS details were not part of AVCC atom.
- Streamable files were getting copied to local machine during job
  processing.
- Dolby E guard band error.
- Display time code in blockiness attribute was not in a proper format.
- ALC failed for Cross track PCM template with combined track size
  exceeding 4GB size.

- When mediaset was created using CeriTalk API for File protocol, VLC player failed to playout post job processing.
- JPEG 2000 file with interlaced video reported play time as half of audio track duration.
- Picture error detected with the H.264 optimized decoder.
- Timestamp displayed for the blockiness value attribute was beyond the actual play length of the file.
- Database restore error while using Japanese locale.
- Some streams were hung forever at 0% for jobs using both Cross track templates and PCM templates.
- Fatal error issue while processing some MP4 files with AVC video.
- Memory allocation issue while processing some MXF files containing AES audio when audio data was greater than 3 GB.
- Cerify did not detect blockiness in a file with visible blockiness artifacts.
- Intermittent audio not detected issue while processing some MXF files.
- Drop-frame time code location shown in alerts was not correct for some MXF files.
- Audio standard was not specified under audio info while processing some Microsoft Smooth streaming files containing AAC audio.
- Cerify was not correctly reporting "EBU line-up tones" presence.
- PTS values of audio track were not maintained by TS rewrapping after audio loudness correction of the audio track.
- QT rewrapping of AIFF audio track failed after audio loudness correction.
- RIP (Random Index Pack) detection issue while processing some MXF files.
- Cluster of more than 6 units was becoming unstable very frequently.
- Memory allocation issues while processing some MXF files.
- Intermittent processing errors while processing MOV and MXF files.
- Partial checks were not working with cross track audio templates.
- Memory allocation issues while processing MXF files in which some metadata associated with Edit Unit was incorrect.
- Memory allocation issue while processing MXF files containing 8-channel AES3 (D10) audio tracks (whose size is greater than 3 GB).
- Cerify was not able to process TS Files with Unicode character names when rewrapping was enabled.
- Issue in processing MXF file when the UL value for Essence Container and for Picture Essence Coding were not same.
- Argentina Time zone issue.
- When SMTP server needed authentication, Cerify e-mail functionality was not working.
- Action template Copy action was failing in some rare occasions. Added the support to do multiple retries so that the probability of copy failures is reduced.
- Partial checks feature were not available in AVID AMT container template.
- ALC log was not displaying properly the "file names with Unicode characters".
- File names with Unicode characters were not appearing in PDF report.
- Cerify was not able to detect AAC stream in some TS files.
- There was audio and video duration mismatch for TS file with AAC audio.
- Cerify was detecting mono channel for an AAC audio stream containing stereo channels.
- Drop-frame attribute was not shown correctly even though the video frame rate was "29.97".

General limitations

This software release has the following general limitations. Please check
the Tektronix Web site (www.tek.com/software/downloads) for any updates
to the Cerify software.

- Occasional job processing errors are observed, while processing large
  SStP files with Container template, Video template (with all quality
  tests enabled) and Audio template (with loudness correction enabled).

- Streamable files may still get copied under certain scenarios.

- To execute and get alerts of the Guardband test, the Syntax test needs to
  be enabled.

- Stream Attributes
    - The following audio attributes, which are calculated at end of stream,
      are not displayed for the tracks that are not selected for processing
      in the profile:
            - Length (play length)
            - Bit rate
            - Length (bytes)
    - When only a container template is selected and no audio/video templates
      are selected for processing, the length (play length) and bit rate
      attributes will not be available under "Container Info".
    - When only a container template is selected and no audio/video templates
      are selected for processing, the tests related to play length (duration)
      and bit rate (i.e., tests in container templates like Play Time, Bitrate,
      Audio/Video duration and Clip Duration) will not be available. Also, if
      selected will give raise to alerts.
    - If video template is not available, then the video time code will not be
      available for use in alerts.

- Blockiness Test
    - The test fails to detect blockiness if the video frames contain
      mixed-size blocks and/or "block boundaries are not aligned".

- Tape Dropout Artifacts Test
    - The test fails to detect dropout artifacts if the structure of artifacts
      does not fit into the "2-D dot matrix like pattern" or "horizontal/vertical
      lines pattern".

- QuickTime rewrapping after loudness correction
    - Only RIFF and AIFF audio formats are supported for rewrapping into
      QuickTime files with reference to external essences.

- HA Cluster
  - HA cluster might not work correctly if there is momentary outage of the network (less than 10 seconds). In such cases, you might need to restart the cluster.
  - HA cluster will not work correctly if the dongle is removed and reattached (both on primary and secondary Supervisors) or if the dongle is missing in any of the Supervisor systems.
  - The in-place upgrade of the database will not be performed when an existing non-HA version of Cerify is upgraded to an HA Enterprise cluster option. While upgrading your Supervisor or standalone Cerify to HA Supervisor, please perform the following steps:
    - Take the backup of the database using the database backup option in the Admin page.
    - Perform the installation upgrade by executing the Cerify installer.
    - Restore the previously backed up database using the database restore option in the Admin page.

- MXF rewrapping after loudness correction (Op1A and OPAtom1A streams)
  - Rewrapping is not supported for an MXF file containing mixed SMPTE 337M/PCM audio tracks.

  - After rewrapping, the following items will not be preserved in the rewrapped streams:
    - Package Names
    - Sub-packages
    - Dark metadata
    - ULs registered for private use (private metadata)

  - The rewrapped stream will always have the following:
    - Random Index Package
    - MXF Generic Container Version as SMPTE 385M System Metadata Pack
    - A Footer partition

  - The following items will change in the rewrapped stream:
    - Index SID
    - Body SID

  - The size of the rewrapped stream may be different from the original.

  - MXF rewrapping is not supported for MXF files containing MPEG-4 SStP (Simple Studio Profile) video.

- DPP Attributes
  - If the input MXF file has more than one time line track, then the rewrapped file will have incorrect Start of Material (SOM) values for these tracks.

  - "Material Start" attribute is shown as mandatory attribute in the DPP application. However, according to DPP Technical Delivery specifications, this is not mentioned as a mandatory attribute. Therefore, Cerify will not display this as part of DPP info.

  - AFD value, if not coded as part of UL
    "0x6,0xe,0x2b,0x34,0x1,0x1,0x1,0x5,0x4,0x1,0x3,0x2,0x9,0x0,0x0,0x0",
    Cerify will not be able to detect the same.

  - If the coded value of "Total Number of Parts" does not match with the physical track count, Cerify does not currently raise any alert. Also, the available physical track values are not displayed.

- MPEG-4 Simple Studio Profile (SStP) Video
    - Interlaced video processing is not supported by the MPEG-4 SStP Standard
      Reference Decoder.

- TS rewrapping after loudness correction
    - If the original transport stream contains TS related errors, the
      rewrapped stream also might contain those errors in certain conditions.
    - Rewrapping of corrected AC3 streams are supported only for the
      transport streams with 188 byte packet size.

- Cross Track Audio Tests
    - When the input stream contains audio tracks of different audio formats,
      then Cerify will not allow use of track indices in cross track audio
      template for cross track audio tests. Instead of track indices,
      track ids should be used.

- Cross Track Audio Loudness Correction
    - Cerify supports cross track correction only for WAV format (RIFF and BWF).
    - Cross track correction support is limited to tracks with a single channel.
    - Bitstream correction is not supported for cross track loudness
      correction.

- Audio loudness correction
    Limitations imposed by the Dolby Professional Loudness Correction engine:
    - AC3:
        - Sampling rates supported: 48 kHz
        - Number of channels supported: 1 to 6
        - Audio loudness correction library fails when trying to correct a
          silent audio stream
    - WAV (RIFF/ RF64/ BWF) limitations:
        - Sampling rates supported: 32, 44.1, or 48 kHz
        - Bit depth supported: 16, 20, or 24
    - Dolby E limitations:
        - Maximum Dolby E frame rate supported: 30 fps
        - Bit depth supported: 16 or 20
        - Must contain Dolby Digital metadata for each program

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