

**MMIE SOP-07 VHS Tapes & Other Analog Media
Enhancement**

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Approved by Director: Dr. Guy Vallaro

A. Purpose:

General operating procedure for handling the enhancement of analog type video evidence

B. Responsibility:

Forensic science examiners

C. Procedure:

1. Inspect the analog media to ensure that there is no damage and the media is in good working condition.
2. If the media is damaged, note the damage and contact the submitting agency. Repair the damage if possible and note the repairing measures on the applicable worksheet.
3. After implementing erasure prevention practices, insert the analog media into the appropriate player (TL/RT).
4. Verify that the input/output signals are operating correctly.
5. In the examiner's computer documents, a working folder should be created with the laboratory case number as the identifier for all files/media generated.
6. Open the appropriate capturing software (Avid dTective, Salient Stills, Canopus or applicable software) and activate the capture mode according to the user manual instructions.
7. Capture the relevant section of video information as noted in the Request for Examination form.
8. Save the captured segment as a video (.avi, mpg,.mov ect.) file with a case number or other identifier. *e.g. ID-06-12345capture 1.avi or bankrobbery.avi*
9. Analyze the captured file using the following software:
 - Adobe Photoshop
 - Adobe Premiere Pro
 - Cognitech
 - dTective by Ocean Systems

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- Salient Stills
- Other similar enhancement software

These software applications may be used to apply the following filters: adjusting audio levels, deinterlacing, demultiplexing, exporting single or multiple frames, changing fields to frames, playback speed adjustment, frame averaging, sharpening, levels or brightness/contrast adjustment, highlighting, magnifying, inverting or inserting informational text into a video or photographic file.

10. Any files generated from the digital media should be saved using the highest quality setting.
11. Exported files can be created and labeled in the following manner: camera/time/date stamp information (*c# mmddyy hhmmss.tif*, *c# hhmmss.tif*, *mmddyy hhmmss.tif* or *hhmmss.tif*) or submission number (*Example: S001 1.tif (graphic files)* or other descriptor).
12. After analysis of the video evidence is completed, save any video files or exported image files in the examiner's case folder on the computer and a copy of this file should be transferred onto a CD/DVD for archiving.
13. The submitting agency may receive a set of printed images or a compact disk containing the image files.
14. If photographs or a media containing electronic files are generated to be disseminated to the requesting agency or retained as archives, a sub-item will be created in the *LIMS JusticeTrax System*. This sub-item will be filed as Submission #-M# (*e.g. 1-M1*).

D. Sources of Error:

Equipment malfunction or condition of evidence

E. References:

- Adobe Corporation. (2005). *Adobe Photoshop CS2 User Guide*. San Jose: Adobe Systems Incorporated.
- Adobe Corporation. (2005). *Adobe Premiere Pro 2.0 User Guide*. San Jose: Adobe Systems Incorporated.
- Adobe Corporation. Adobe Production Suite CS5 on-line help. www.adobe.com
- Ang, T. (1999). *The Art of Digital Photography*. New York: Octopus Publishing Group.
- Cognitech Corporation. (1998). *Cognitech Video Investigator User Guide*. Pasadena: Cognitech

**State of Connecticut Department of Emergency Services and Public Protection
Division of Scientific Services**

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- Inc.
- Corel Corporation. (2008). *Corel Draw Graphics Suite X4 User Guide*. Ottawa: Corel Corporation.
- Diamond Cut Productions Corporation. (2009). *User's Manual for DC Live/Forensics and Diamond Cut DC 7* (13th ed.). Hibernia: Diamond Cut Productions Inc.
- Galer, M. & Horvat, L. (2001). *Digital Imaging*. Oxford: Butterworth-Heinemann.
- Johnson, S. (2006). *On Digital Photography*. Cambridge: O'Reilly Media Inc.
- Ocean Systems - dTective 6.1.2 - 06/2011 <http://www.oceansystems.com/dtective/>
- Pohlmann, K. C. (2005). *Principles of Digital Audio* (5th ed.). New York: McGraw-Hill.
- Salient Stills Corporation. (2006). *Video Focus Version 2.0 Windows User Guide*. Cambridge: Salient Stills Inc.
- SWGIT Guidelines. (2007). Special Working Group of Imaging Technology