

# Multimedia Authentication Testing

MAT (ver#3)

Analyst(s) name(s) \_\_\_\_\_ Testing date \_\_\_ / \_\_\_ / \_\_\_

Tested file name \_\_\_\_\_

MD5-SHA1 hash \_\_\_\_\_

Tested time range \_\_\_\_\_

File format *Open-Proprietary* in the \_\_\_\_\_ extension identified as \_\_\_\_\_ by file data

Data streams \_\_\_\_\_% visual, \_\_\_\_\_% audio ( \_\_\_\_\_ entirely silent ), and \_\_\_\_\_% other data

Metadata GPS \_\_\_\_\_ Hardware \_\_\_\_\_

Date-times Created \_\_\_\_\_ Modified \_\_\_\_\_

Auditing data \_\_\_\_\_

## Image or Video Stream Analysis (check if testing is applicable )

Stream details \_\_\_\_\_ color space at \_\_\_\_\_ x \_\_\_\_\_ resolution. \_\_\_\_\_ resized. \_\_\_\_\_ interlaced.

Saved in \_\_\_\_\_ codec using \_\_\_\_\_ writing library

Temporal analysis \_\_\_\_\_ fps speed \_\_\_\_\_ unnatural. \_\_\_\_\_ duplicate frames. \_\_\_\_\_ time skipping.

Pass-Fail tests PRNU \_\_\_\_\_. Data cloning \_\_\_\_\_. PCA editing \_\_\_\_\_. DCT editing \_\_\_\_\_.

JPEG editing \_\_\_\_\_. HSV-Lab histogram \_\_\_\_\_. Luminance gradient \_\_\_\_\_.

Chromatic aberrations \_\_\_\_\_. Double compression \_\_\_\_\_. ELA-VELA \_\_\_\_\_.

Threshold tests\* \_\_\_\_\_

\* e.g. Temporal contrast, temporal diffusion, spatial predictability, temporal noise diversion, temporal histogram correlation, non-monotonous motion, etc.

## Audio Stream Analysis (check if testing is applicable )

Stream details \_\_\_\_\_ channels at \_\_\_\_\_ bit depth, \_\_\_\_\_ kHz sampling, in \_\_\_\_\_ codec

Spectral limits Perceptible up to about \_\_\_\_\_ kHz Noise ceiling up to about \_\_\_\_\_ kHz

Simple analysis Upsampling \_\_\_\_\_ detected Audio data cloning \_\_\_\_\_ detected

Acute transitions Bias transition \_\_\_\_\_ detected Noise profile transition \_\_\_\_\_ detected

Critical listening Speed inaccuracy \_\_\_\_\_ detected Stream de-synchronization \_\_\_\_\_ detected

Amplitude tests \_\_\_\_\_ silence ( \_\_\_\_\_ absent noise ) \_\_\_\_\_ clipping ( \_\_\_\_\_ within a time span )

Signal tracking \_\_\_\_\_ possible and found \_\_\_\_\_

Subsonic impulse \_\_\_\_\_ possible and found \_\_\_\_\_

## Spot Testing (check if testing is applicable )

Tested times are \_\_\_\_\_

Pause/stop-start Audio DC impulse \_\_\_\_\_ detected. Abrupt visual scene change \_\_\_\_\_ detected.

Acute shifts in: Amplitude \_\_\_\_\_ detected. Noise profile \_\_\_\_\_ detected. Motion \_\_\_\_\_ detected.

Additional tests, notes and observations:

(Reference relevant "Has", "Is" or "Fail" test results)

**OPINION:** To a *definitive-high-reasonable* degree of expert confidence, the tested content is found to be a *faithful-questionable-manipulated* representation of the case facts.

Answer with ("No", "Not", "Pass") or ("Has", "Is", "Fail") , else "No data", where applicable. Select appropriate italic option. Forensic Working Group: 2018