Scientific Working Group on Digital Evidence

SWGDE Data Integrity Within Computer Forensics

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Data Integrity Within Computer Forensics

1.0 Digital Evidence

Digital Evidence submitted for examination should be maintained in such a way that the integrity of the data is preserved. The commonly accepted method to achieve this is to use a hashing function. The hashing function will generate a mathematical value for either an individual file or an entire drive. This value will be changed dramatically if any data is altered or the file is accessed.

2.0 Security

Security, both logical and physical, is used to prevent the contamination between cases or unauthorized access to the original evidence or forensic image. This can be accomplished by different means depending on the agency's protocols and the type of evidence. It is incumbent upon the examiner to document all procedures used.

3.0 Hashing

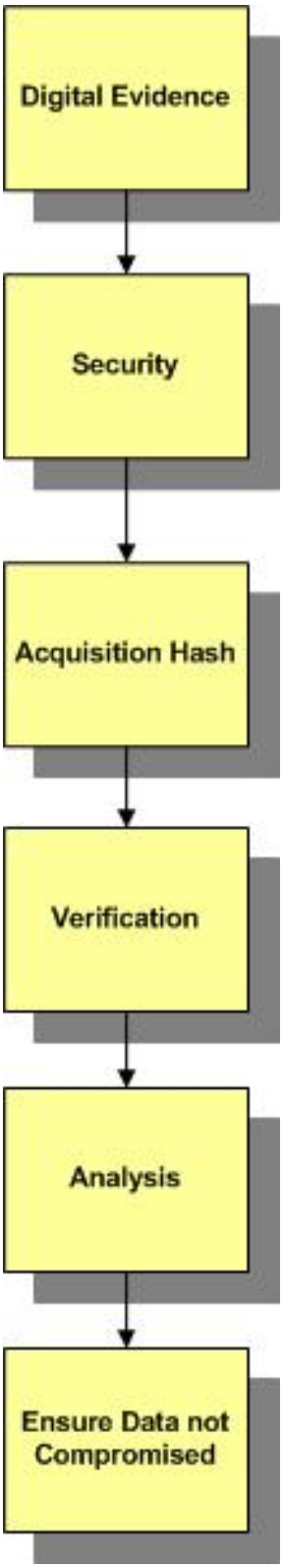
Hashing of the original data, commonly referred to as an acquisition hash, should be done when an image of the data is being created.

4.0 Verification/Analyzation

A verification hash of the image is done after the completion of acquisition but before the image is analyzed to ensure that the integrity of the data has not been compromised.

5.0 Rehash of Image

At the conclusion of the examination, the image can be hashed to prove that no alterations have occurred to the data. If a re-examination is requested, hashing can be performed to authenticate the image as a true and accurate representation of the original evidence.


Digital Evidence
Security
Acquisition Hash
Verification
Analysis
Ensure Data not Compromised