



# Scientific Working Groups on Digital Evidence and Imaging Technology



## SWGDE/SWGIT Proficiency Test Program Guidelines

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# SWGDE/SWGIT Proficiency Test Program Guidelines

## Proficiency Test Program Guide

### 1. Purpose

To provide a guide to implement a Digital and Multimedia Evidence (DME) proficiency test program.

### 2. Scope

The proficiency test program, which is one component of a Quality Assurance program, should verify that the technical procedures are valid and that the quality of each examiner's work is being maintained.

### 3. Sub-disciplines

- Computer Forensics
- Forensic Audio
- Video Analysis
- Image Analysis

### 4. Test Preparation and Design

Proficiency tests may be internal or external, open or blind. Tests shall be subdiscipline specific, process based, and representative of items routinely examined. The test shall be prepared and anticipated results documented by an individual or organization identified by the tested agency as technically knowledgeable in the subdiscipline. A second individual identified by the tested agency as technically knowledgeable in the subdiscipline shall confirm the suitability for testing, the completeness of the test and anticipated results. The test should be representative of routine DME casework. It should be noted that Examiners and technical support personnel need only demonstrate proficiency in those processes, which are representative of their routine activities. Furthermore, examiners need not demonstrate competency in all of the processes listed in order to be considered qualified to perform individual examination processes.

The proficiency test may include, but is not limited to, one or more of the processes listed in Table 1.



**Table 1: Proficiency Test Processes**

<b>Computer Forensics</b>	<b>Forensic Audio</b>	<b>Video Analysis</b>	<b>Image Analysis</b>
Write Protect	Write/Record Protect	Write/Record Protect	Write/Record Protect
Media Characterization	Media Characterization	Media Characterization	Media Characterization
Physical /Logical Copy	Duplicate/Copy	Duplicate/Copy	Image Data Recovery
Restoration	Reconstruction/Recovery	Digital CCTV Retrieval	Data Extraction
Directory Listing	Playback Optimization	Video Media Reconstruction	Image Authentication
Erased File Recovery	Data Extraction	Playback Optimization	Enhancement
Residue Extraction	Data/Signal Analysis	Standard Conversion	Timeline Sequence Reconstruction
Search by Criteria	Enhancement	Data/Signal Analysis	Image Content Analysis
Internet Activity	Authentication	Video Enhancement	Report of Findings
Password Recovery	Report of Findings	Video Authentication	Photogrammetry
Verification	Standard Conversion	Demonstrative Comparison	Duplicate/Copy
Identification and/or recovery of hidden information	Format Conversion	Photogrammetry	Photographic Comparison
Identification and/or recovery of encrypted data		Timeline Sequence	
Report of Findings		Report of Findings	
		Video Stabilization	
		Format Conversion	
		DeMultiplex	
		Reconstruction	

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## 5. Test Approval

Test preparation documentation, test design, and anticipated results will be provided to an individual, identified by the agency, as technically knowledgeable in the sub discipline and the quality assurance personnel for approval.

## 6. Distribution

Personnel actively performing or technically assisting in examinations will be required to complete successfully at least one proficiency test annually. The unit must participate in one external proficiency test annually. It is recommended that personnel be tested annually in each sub discipline in which they actively perform or technically assist in examinations.

## 7. Testing Process

Proficiency tests will be conducted according to the agency approved protocols in effect at the time of the proficiency test.

## 8. Review of Test Results

The results and supporting documentation will be evaluated by qualified personnel identified by the agency. Additionally, results and the evaluation will be provided to the management and reviewed with the individual tested.

## 9. Documentation

The proficiency test results and supporting documentation will be retained in accordance with the agency's documentation retention policy.

## 10. Corrective Action

Inconsistencies in the proficiency test results will be resolved in accordance with the corrective action policy of the agency's DME program. The corrective action policy should address inadequacies of the test, process, and the tested individual.



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## History: SWGDE/SWGIT Proficiency Test Program Guidelines

<b>Revision</b>	<b>Issue Date</b>	<b>Section</b>	<b>History</b>
1.0	11/15/04		Original Release
1.1	01/30/06	Table 1: Under Image Analysis – deleted Image Media Reconstruction, Demonstration Comparison. Added: sequence to Timeline Reconstruction. Under Video Analysis – deleted Video Data Recovery, Image Export. Added: Digital CCTV Retrieval added Data to Signal Analysis, deleted “ing” from sequence, added Video Stabilization.	Revision of document
--	9/27/2014 Admin Change Only	Disclaimer	Updated document with new SWGDE/SWGIT disclaimer. No changes to content and no version/publication date change.

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