



Scientific Working Group on Digital Evidence

SWGDE Myths and Facts about Accreditation for Digital and Multimedia Evidence Labs

Disclaimer:

As a condition to the use of this document and the information contained therein, the SWGDE requests notification by e-mail before or contemporaneous to the introduction of this document, or any portion thereof, as a marked exhibit offered for or moved into evidence in any judicial, administrative, legislative or adjudicatory hearing or other proceeding (including discovery proceedings) in the United States or any Foreign country. Such notification shall include: 1) The formal name of the proceeding, including docket number or similar identifier; 2) the name and location of the body conducting the hearing or proceeding; 3) subsequent to the use of this document in a formal proceeding please notify SWGDE as to its use and outcome; 4) the name, mailing address (if available) and contact information of the party offering or moving the document into evidence. Notifications should be sent to secretary@swgde.org.

It is the reader's responsibility to ensure they have the most current version of this document. It is recommended that previous versions be archived.

Redistribution Policy:

SWGDE grants permission for redistribution and use of all publicly posted documents created by SWGDE, provided that the following conditions are met:

1. Redistribution of documents or parts of documents must retain the SWGDE cover page containing the disclaimer.
2. Neither the name of SWGDE nor the names of contributors may be used to endorse or promote products derived from its documents.
3. Any reference or quote from a SWGDE document must include the version number (or create date) of the document and mention if the document is in a draft status.

Requests for Modification:

SWGDE encourages stakeholder participation in the preparation of documents. Suggestions for modifications are welcome and must be forwarded to the Secretary in writing at secretary@swgde.org. The following information is required as a part of the response:

- a) Submitter's name
- b) Affiliation (agency/organization)
- c) Address
- d) Telephone number and email address
- e) Document title and version number
- f) Change from (note document section number)
- g) Change to (provide suggested text where appropriate; comments not including suggested text will not be considered)
- h) Basis for change



Scientific Working Group on Digital Evidence

Intellectual Property:

Unauthorized use of the SWGDE logo or documents without written permission from SWGDE is a violation of our intellectual property rights.

Individuals may not misstate and/or over represent duties and responsibilities of SWGDE work. This includes claiming oneself as a contributing member without actively participating in SWGDE meetings; claiming oneself as an officer of SWGDE without serving as such; claiming sole authorship of a document; use the SWGDE logo on any material and/or curriculum vitae.

Any mention of specific products within SWGDE documents is for informational purposes only; it does not imply a recommendation or endorsement by SWGDE.



Scientific Working Group on Digital Evidence

SWGDE Myths and Facts about Accreditation for Digital and Multimedia Evidence Labs

Table of Contents

1. Purpose.....	4
2. Scope.....	4
3. What is Accreditation	4
3.1 Definitions.....	4
4. Myths and Facts	5



Scientific Working Group on Digital Evidence

1. Purpose

This document is intended to address commonly expressed myths about accreditation under ISO/IEC 17025 or 17020 in the Digital and Multimedia Evidence Forensic Science Service Provider (DME FSSP) community. This document responds to ongoing discussions within the forensics community about the appropriate role of accreditation including a recommendation from the National Commission on Forensic Science to the Attorney General on Accreditation of DME FSSPs¹.

2. Scope

This document applies to DME organizations providing forensic services. While it is recognized that DME organizations vary in size, the core concepts of quality assurance remain the same.

3. What is Accreditation

Accreditation serves to independently verify that a laboratory is competent to produce reliable results. Accreditation addresses whether a laboratory is using reliable methods, appropriate equipment and software, competent personnel, and drawing reasonable conclusions. There are currently two organizations accrediting DME labs: 1) the ANSI-ASQ National Accreditation Board (ANAB) and 2) the American Association for Laboratory Accreditation (A2LA).

Objectives of accreditation include:

- Improving quality of laboratory services to customers and stakeholders.
- Providing documentation that laboratories meet established standards.

3.1 Definitions

Accreditation – The procedure by which an authoritative body gives formal recognition that a lab is competent to carry out specified tasks.

Accreditation body – An organization conducting and administering an accreditation system.

¹ <https://www.justice.gov/ncfs/accreditation-and-proficiency-testing-subcommittee-0>



Scientific Working Group on Digital Evidence

4. Myths and Facts

Unfortunately, there are many aspects of quality assurance and accreditation that are often misquoted or misunderstood. The following are intended to set the record straight on a number of the most commonly encountered myths.

MYTH: "Accreditation is unaffordable." (Option 1)

MYTH: "Everyone can afford accreditation." (Option 2)

FACT: If an organization does not currently employ personnel to write and enforce quality assurance policy, there may be a significant cost associated with beginning the accreditation process. Additionally, there is a financial cost that would be paid to the accrediting body (application fee, on-site visit(s), and annual fee). All accreditation related costs vary based upon the size of the laboratory and the choice of implementation. For example, a laboratory comprised of satellite locations could choose an incremental accreditation or a system-wide implementation dependent upon their needs and resources.

Additional information on the costs and/or funding for accreditation can be found at:

- ANSI-ASQ National Accreditation Board: www.anab.org
- ASCLD-LAB: www.ascl-d-lab.org
- American Association for Laboratory Accreditation (A2LA): www.a2la.org
- Coverdell Grant:
www.nij.gov/topics/forensics/lab-operations/capacity/nfsia/pages/welcome.aspx
- Department of Justice – Assistance Grants: www.ojp.gov/funding
- Edward Byrne Memorial JAG Program:
https://www.bja.gov/ProgramDetails.aspx?Program_ID=59

MYTH: "Accreditation will require more personnel resources."

FACT: Personnel involved in quality assurance procedures will vary based upon the size of the laboratory. Larger laboratories may require personnel dedicated to working within a quality system, whereas smaller laboratories may not require dedicated personnel. Even in larger laboratories, some personnel may perform multiple roles. This does not necessarily create a conflict of interest. The personnel resources for maintaining accreditation are less than the initial investment of obtaining accreditation. There are successful approaches for small and one-person laboratories to implement quality systems.



Scientific Working Group on Digital Evidence

MYTH: "The accreditation process can be completed within a few months."

FACT: Implementing a quality management system is a process intended to provide a foundation for competency and continuous improvement. The process of developing and implementing a quality management system by a laboratory that can meet accreditation requirements may take 1-3 years depending on the size and resources of the laboratory.

Additionally, accrediting bodies may require laboratories to operate under their quality management system for one year before applying for accreditation.

MYTH: "Accreditation means a laboratory or work product is perfect."

FACT: Accreditation ensures that laboratories are competent to perform examinations. It provides a consistent baseline for how laboratories should operate. It also provides a structure for accountability and process improvement. The work product produced by non-accredited laboratories may be as good or better than accredited laboratories. Factors, such as human error or faulty equipment, exist regardless of whether a laboratory is accredited. Accreditation requires that laboratories have processes to document, address, and correct problems.

MYTH: "Accreditation will limit the organization's capabilities."

FACT: Accreditation, in itself, does not define the technical procedures that a laboratory must use. New and novel techniques are often required to meet customer needs. When established methods are insufficient to conduct an exam, accreditation standards permit the use of documented deviations.

MYTH: "Accreditation is a one-time event."

FACT: Accreditation is an on-going process. When a laboratory is seeking initial accreditation they will undergo a full accreditation assessment. After a laboratory has achieved accreditation, the accrediting body may have on-going self-reporting requirements. Further, the accrediting body may conduct onsite visits to assess continuing performance. Continuous improvement, such as reviewing the relevancy of policy and procedures, is a foundation of accreditation.

MYTH: "It is impossible for a one-person laboratory to be accredited because of the peer review requirement."

FACT: Accreditation does require a sub-set of casework to be reviewed by another trained and knowledgeable individual with similar casework experience. This requirement can be met through cooperation with other laboratories or through consultants.

MYTH: "To become accredited, a laboratory must start from scratch without any assistance."

FACT: Assistance with accreditation is available in multiple forms. There are accredited digital laboratories of all sizes, and many of these laboratories are willing to share their experience and resources. Accrediting bodies may be able to direct you to laboratories that are willing to assist. SWGDE's website has resources available to assist with the process.



Scientific Working Group on Digital Evidence

MYTH: "Accreditation and certification are the same thing."

FACT: Accreditation assesses the competence of the laboratory; certification assesses the competence of the examiner. Accreditation and certification both promote work product quality.

MYTH: "Accreditation creates unnecessary work."

FACT: While there is work involved in obtaining and maintaining accreditation, the work can be valuable and the return on investment can be substantial. The accreditation process can identify areas for increased efficiencies, quality control, and promote consistency within the laboratory. Additional documentation that is required in accredited laboratories can improve repeatability and reproducibility within the laboratory and foster communication across laboratories.

MYTH: "Digital and multimedia evidence does not fit existing accreditation standards."

FACT: Accreditation standards accommodate multiple forensic science disciplines, including digital and multimedia evidence. There are currently many accredited digital and multimedia forensic laboratories of various sizes. ISO 17025/17020 are intended to establish a common foundation for a quality management system and have been successfully applied to a wide range of forensic science and other disciplines.

MYTH: "The accreditation assessor may impose requirements that aren't real requirements and the laboratory will have to do what they say."

FACT: While there may be instances of assessors overstepping their boundaries based on personal experience or lack of knowledge of the field, there are multiple processes for seeking redress should the situation arise. In the past, these instances may have resulted from a lack of trained digital and multimedia assessors. As the digital and multimedia discipline has matured, this problem has lessened as the number of experienced assessors has increased. Prior to the assessment, there is a process for ensuring your technical assessor is qualified and acceptable for your discipline.

MYTH: "The laboratory will need to calibrate equipment."

FACT: Most digital forensic equipment cannot be calibrated and, as such, calibration is not a requirement for accreditation. However, some equipment that is analog in nature may need calibration. Equipment must be maintained in accordance with the manufacturer's specifications.

MYTH: "My laboratory will need to have a sampling plan, defined error rates, and measurement uncertainty."

FACT: These requirements do not apply to digital evidence and are often misunderstood. SWGDE has a paper on error mitigation that includes a discussion on error rates and will also be addressing sampling and measurement uncertainty in future papers.



Scientific Working Group on Digital Evidence

MYTH: "Digital forensics laboratories need to be accredited separately from other forensic disciplines."

FACT: Quality management systems are discipline agnostic. Digital forensic labs can operate under quality management systems established for other forensic disciplines and operating units such as in police departments.

MYTH: "Accreditation only means say what you do, do what you say."

FACT: While correct documentation is essential, accreditation is primarily focused on laboratory competence. Accredited laboratories must use techniques that are appropriate (e.g., techniques that have been validated, accepted for use in the DME community, based on sound scientific principles). In addition, results must be reported correctly and accurately.



Scientific Working Group on Digital Evidence

SWGDE Myths and Facts about Accreditation for Digital and Multimedia Evidence Labs

History

Revision	Issue Date	Section	History
1.0 DRAFT	2016-09-15	All	Initial draft created and SWGDE voted to release as a Draft for Public Comment.
1.0 DRAFT	2016-10-08	All	Formatted and technical edit performed for release as a Draft for Public Comment.
1.0	2017-01-12	1	Modified the language in <i>1. Purpose</i> for clarity. SWGDE voted to publish as an Approved document (Version 1.0)
1.0	2017-02-21	Formatting	Formatted and published as Approved Version 1.0.