NATIONAL COMMISSION ON FORENSIC SCIENCE

NIST National Institute of Standards and Technology U.S. Department of Commerce

Recommendation to the Attorney General Accreditation of Digital and Multimedia Evidence Forensic Science Service Providers[1]

Subcommittee
Accreditation and Proficiency Testing
Status
Adopted by the Commission

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Action by Attorney General	[*dd/mm/yy*]

Commission Action
On January 9, 2017, the Commission voted to adopt this Recommendation by a more than two-thirds majority affirmative vote (84% yes, 13% no, 3% abstain).

Note: This document includes recommendations developed and adopted by the National Commission on Forensic Science and proposes specific acts that the Attorney General could take to further the goals of the Commission. The portion of the document directly labeled "Recommendations" represents the formal recommendations of the Commission. Information beyond that section is provided for context. This document does not necessarily represent the views of the Department of Justice or the National Institute of Standards and Technology. The National Commission on Forensic Science is a Federal Advisory Committee established by the Department of Justice. For more information, please visit: https://www.justice.gov/ncfs.

Overview

The 2009 National Research Council (NRC) report on forensic science set forth 13 recommendations for forensic science service providers (FSSPs).[2] Relevant among these were best practices; standardization; and improving the quality of services, including accreditation of Digital and Multimedia Evidence (DME) FSSPs. The NRC report noted that insufficient data exists on the number and expertise of forensic science practitioners who are not employed in publically funded laboratories.[3] There are DME FSSPs currently providing services in furtherance of criminal, civil, regulatory, or administrative proceedings in the United States who are not

[1] This document adopts the definitions of forensic science, forensic science service provider, forensic science agency, and forensic science practitioner developed by the National Commission on Forensic Science. See http://www.justice.gov/ncfs/file/786571/download .
[2] National Research Council of the National Academies. *Strengthening Forensic Science in the United States: A Path Forward*, Washington, DC, 2009.
[3] *Ibid*., pg. 64.

accredited to any national or international standard. There are potentially thousands of DME FSSPs, predominately in law enforcement agencies, providing limited forensic science services. The majority of these providers are not accredited.

Accreditation is regarded as an important benchmark to ensure ongoing compliance to industry standards and continual improvement of a FSSP's operations. Accreditation assesses a FSSP's capacity to generate and interpret results. Accreditation criteria are based on accepted industry standards and applicable international standards. Accreditation uses these criteria to assess the quality of the FSSP's management system by examining, among other things, staff competence, training, and continuing education; method validation; appropriateness of methods; traceability of measurements and calibrations to national standards; suitability, calibration, and maintenance of equipment; environment; documentation, sampling, and handling of evidential items; and quality assurance, including proficiency tests. The accrediting body prepares the assessment report and monitors any remediation to ensure the appropriate corrective action(s) have been implemented before accreditation is granted. Accreditation also includes periodic surveillance by the accrediting body to ensure continued compliance with requirements. Failure to maintain these standards can result in the accrediting body suspending or revoking the accreditation of the FSSP.[4]

Accreditation will improve the DME FSSP's ongoing compliance with industry best practices, promote standardization, and improve the quality of services provided by the FSSPs nationally.[5]

ISO/IEC 17020 and 17025 accreditation standards encompass the entirety of operations, with emphasis on quality management and high level technical requirements, such as validation. Additional digital evidence technical standards, such as ISO/IEC 27041:2015 – 27043:2015, are designed to complement rather than replace 17020 or 17025.

Accreditation to internationally recognized standard ISO/IEC 17025, *General Requirements for the Competence of Testing and Calibration Laboratories*, can and has been successfully applied to DME FSSPs of all types and sizes. Large Federal FSSPs with more than 100 practitioners as well as single practitioner state and local FSSPs have been accredited under ISO/IEC 17025 for approximately 10 years. However, it is acknowledged that significant sections of the DME community are 1) unfamiliar with accreditation, 2) independent of other accredited forensic science disciplines in their agency or locations, 3) performing limited specialized tasks as part of investigations, and 4) concerned over how accreditation will impact workload and backlog due to additional costs and resources.

Due to these factors, mandatory timelines for universal accreditation of DME FSSPs cannot be developed at this time. Additional work needs to be done before timelines can be established.

- The DME community should be provided education on accreditation. Topics should include information to address misperceptions about accreditation, how accreditation can be applied, how existing ISO standards can work for DME, and the overall improvements that can accompany accreditation.

[4] For additional information, see *The Advantages of Being an Accredited Laboratory*, ILAC Publications, 2010.

[5] The recommendation that FSSPs be accredited is a policy meant to ensure an increase in overall quality and quality assurance. It is not meant to be used as a criterion for a threshold admissibility determination for a particular expert or conclusion. Those types of decisions are made pursuant to judicial standards applying the criteria enunciated in Daubert, Frye, FRE 702, and/or various state laws.

- The DME community should be defined as to its current size and the types of individuals working and tasks performed. This information should help determine the scope of accreditation as it pertains to the particular tasks and personnel within an FSSP.
- The applicable ISO standards and industry-specific supplemental standards should be evaluated and recommended for use in accreditation programs for DME FSSPs. Although ISO/IEC 17025 is applicable, other standards, such as ISO/IEC 17020, *Requirements for the Operation of Various Types of Bodies Performing Inspection*, may also be appropriate for DME FSSPs. As has occurred for other forensic disciplines, supplemental standards may be developed. The Organization of Scientific Area Committees for Forensic Science, the National Institute of Standards and Technology and the Scientific Working Group on Digital Evidence could provide assistance with the development of supplemental standards. Consideration should also be given to the best approach for those DME FSSPs not affiliated with other forensic science disciplines and who cannot take advantage of existing quality systems.

Accreditation, as one step in the overall improvement of all forensic sciences, is the ultimate goal, but how the DME community achieves this goal still needs to be determined. The path toward accreditation will be more successful if DME FSSPs implement critical quality elements as outlined in the *Views of the Commission Regarding Critical Steps to Accreditation*[6] document as best practices while working toward formal accreditation and implementation of a quality management system.

Generally, additional FSSP resources are needed whenever additional quality assurance processes are implemented. The establishment of the necessary quality management systems may require significant resources and may impact timeliness of services provided during implementation.

Recommendations

The National Commission on Forensic Science recommends that the Attorney General take the following action(s) for Digital Evidence and Multimedia FSSPs:

- The Attorney General should direct the DOJ DME FSSPs to maintain accreditation, or if not accredited, to prepare for accreditation using accrediting bodies that submit to and are in compliance with ISO/IEC 17011 and are a signatory to the ILAC MRA. Ideally, accreditation shall be to internationally recognized standards (i.e., ISO/IEC 17025 *General Requirements for the Competence of Testing and Calibration Laboratories* or ISO/IEC 17020 *General Criteria for the Operation of Various Types of Bodies Performing Inspection).*
- The Attorney General should direct the DOJ DME FSSPs to implement the Critical Steps to Accreditation[7] as best practices until accreditation can be achieved. These elements include: 1) written procedures for evidence (security/control/handling), 2) written reports, 3) technical and administrative review of reports and supporting records, 4) testimony monitoring, 5) note-taking, 6) technical procedures, 7) training programs, 8) proficiency testing, and 9) corrective and preventive action processes.

[6] Approved by the Commission on March 22, 2016, and accessible at https://www.justice.gov/ncfs/file/839701/download.
[7] *Ibid.*

- The Attorney General should require that Federal prosecutors, where practicable and in cases in which they are in a position to request forensic testing, contract with accredited DME FSSPs. This provision does not apply to analyses conducted prior to the involvement of a federal prosecutor.
- The Attorney General should solicit the Scientific Working Group on Digital Evidence (SWGDE), the Organization of Scientific Area Committees for Forensic Science and the National Institute of Standards and Technology's involvement in establishing best standards and supplemental requirements for accreditation of DME service providers.
- The Attorney General should provide education to the DME community on accreditation, applicability, requirements, and benefits for the digital evidence discipline.
- The Attorney General should encourage accreditation for all DME FSSPs to include the immediate implementation of the Critical Steps to Accreditation as listed above.

Appendix A: Certification vs. Accreditation

Accreditation is an independent third-party assessment of a **FSSP's** (which can consist of one or many practitioners) quality, administrative, and technical systems. Accreditation uses specific criteria and procedures based upon accepted standards to ensure the quality of the FSSP's management system by examining staff competence, training, and continuing education; method validation; appropriateness of test methods; traceability of measurements and calibrations to national standards; suitability, calibration, and maintenance of test equipment; testing environment; documentation, sampling, and handling of test items; and quality assurance of data, including reporting results and proficiency tests. Because accreditation encompasses the entire quality system, it does not assess individual examiner skills and expertise to the level of some professional certification programs.

Professional certification,[8] which is not addressed in this document, is the recognition by an independent body that an **individual** has acquired and demonstrated specialized knowledge, skills, and abilities in the standard practices necessary to execute the duties of their profession. Certification programs can include: written and/or practical testing; an evaluation of education, training, and practical experience; requirements for continuing education; and adherence to a code of ethics. Certification does not assess the quality, administrative and technical systems used by the individual in their work. It also does not assess methods, procedures, testimony, reports, documentation, equipment, validation, measurement uncertainty, facilities, evidence handling, security, or safety procedures used by the individual.

Accreditation and Certification are very different programs that assess and evaluate different aspects of forensic practitioners and FSSPs. They are not interchangeable but both are necessary to strengthen forensic science.

[8] Certification, for purposes of this document, does not include certification of an instrument, equipment, or the company manufacturing the equipment.