



D14 SWGIT Presents: Part 1 - Does Your Forensic Imaging Unit Need Accreditation as a “Digital Evidence Unit”?

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The goal of this presentation is to provide guidance to the forensic community regarding issues relating to imaging technologies and laboratory accreditation. Attendees will better understand whether their imaging units - whether forensic photographic units, forensic image analysis units, or forensic video analysis units - should seek accreditation under the Digital Evidence discipline.

This presentation will impact the forensic community and/or humanity by guiding the forensic community relating to issues of forensic imaging, digital evidence, and accreditation from the Scientific Working Group on Imaging Technologies (SWGIT). Lab managers, quality assurance personnel, and imaging scientists will learn the SWGIT position on how digital imaging and image analysis relates to other disciplines such as computer forensics and forensic photography.

The Scientific Working Group on Imaging Technologies (SWGIT) was created in 1997 by the Federal Bureau of Investigation to provide guidance to the law enforcement community by developing recommendations for good practices in the use of imaging technologies within the criminal justice system. It consists of more than forty imaging professionals drawn from federal, state, and municipal law enforcement organizations, as well as academic institutions. SWGIT work products are not intended to represent the formal policy of any one agency, but, instead, represent a consensus opinion developed by individual experts from a broad sampling of agencies and experiences.

Laboratory accreditation is an issue of great importance to the forensic science community. In the United States, some forensic laboratories are required, by law, to have formal accreditation. In such cases, a failure to achieve accreditation may result in the closure of the facility. Many laboratories are not required by law to achieve accreditation, but choose to pursue this status as one means of establishing their credentials within the field.

Recently, a major accreditation organization - the American Society of Crime Laboratory Directors, Laboratory Accreditation Board (ASCLD/LAB) - recognized “Digital Evidence” as a forensic science discipline in which laboratories could seek accreditation. Included within this discipline, ASCLD/LAB identified three subdisciplines: (1) computer forensics; (2) audio; and (3) video and imaging. This was done with the recognition that the fundamental education, knowledge, training, and experience required to perform forensic examinations in the three subdisciplines of “Digital Evidence” are distinctly different. However, a number of laboratories remain uncertain over how to handle their photographic and video units within this context.

Some of the questions being asked within the imaging and digital evidence communities include the following: Should forensic photographic units seek accreditation under the Digital Evidence discipline? Would it be appropriate to do so? Does the inclusion of “Video and Imaging” under the same discipline as “Computer Forensics” mean that computer forensics examiners are automatically qualified to conduct examinations on video and imaging evidence? Do evidentiary images and videos need to be processed by computer forensics examiners? Do forensic photographers, or individuals engaged in forensic image or video analysis, need to be qualified in the field of computer forensics? Since “Video and Imaging” is identified as a sub-discipline of “Digital Evidence”, are examinations of analog videotapes or film negatives not considered a part of this discipline?

The SWGIT has developed a number of positions regarding these issues. Specifically:

1. The fundamental education, knowledge, training, and experience required to perform forensic examinations in the three sub-disciplines of Digital Evidence (computer forensics, audio, and video and imaging) are distinctly different. For example, individuals conducting computer forensic examinations require competency in such areas as computer systems architecture, operating systems, and storage devices. Individuals conducting image and video examinations require competency in such areas as photography, optics, image capture, and image processing. Therefore, individuals qualified to conduct examinations in one of the sub-disciplines must not be assumed capable of conducting examinations in another.

2. Units engaged in forensic image analysis and/or forensic video analysis seeking accreditation through ASCLD/LAB should do so in the sub-discipline of video and imaging, which is currently included in the discipline of Digital Evidence. This holds true whether original evidentiary items under examination are in digital or analog form.

3. It is not appropriate for forensic photographic units to seek accreditation within the discipline of Digital Evidence unless they perform forensic image or video analysis.

4. Accreditation issues relating to imaging functions performed in accredited disciplines (such as latent prints, questioned documents, DNA analysis, etc.) should be addressed within the accredited discipline, and not



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within the Digital Evidence discipline. For example, an image enhancement used to improve the visibility of ridge detail in a latent print exam is an intrinsic component of the latent print exam, regardless of whether it is performed on a computer or in a wet chemistry darkroom. The same holds true for image enhancements used in the discipline of questioned documents to improve the visibility of a faded signature.

Note that the means by which a particular laboratory handles the issue of accreditation will depend upon the type of work performed by the unit under consideration. Most photographic units will not need to seek accreditation under the discipline of digital evidence. Other units may find that digital evidence is the only appropriate discipline for accreditation. The purpose of this presentation will be to provide SWGIT guidance on this and related issues, as well as to solicit feedback from the community regarding the issues raised in this presentation.

Digital Evidence, Laboratory Accreditation, Forensic Image and Video Analysis