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Section 6

Guidelines and Recommendations for Training in Imaging Technologies in the Criminal Justice System

Purpose

The consistent and reliable use of silver-based, video, and digital imaging technologies in the criminal justice system requires the competent and appropriate training of personnel. The purpose of this document is to provide guidelines and recommendations for such training.

It should be recognized that some agencies may choose to provide training other than what is recommended in this section. In such circumstances, those agencies should demonstrate and document that the training selected is adequate to meet their anticipated needs.

Introduction

Personnel in the criminal justice system who work with images must be aware of the capabilities and limitations of specific imaging technologies. Those engaged in the production or the use of images should be aware of the procedures commonly followed within the law enforcement community and should strive to meet or exceed these recommendations. They should also endeavor to maintain awareness of new developments. In support of these goals, the following recommendations are offered to personnel engaged in the production of images:

- Define and employ quality assurance programs to ensure the implementation of valid and reliable procedures for the task.
- Maintain proficiency by pursuing continuing education courses in imaging technology.
- Maintain awareness of legal developments relating to the use of imaging technologies in the criminal justice system.

Definitions of Categories

Several categories of imaging technology training relevant to the criminal justice system as well as the categories of the system users who would benefit from the training are identified and defined as follows:

Categories of Training

- Awareness: Training designed to provide the student with a general knowledge of the major elements of a given imaging technology including specific product capabilities
- Skills and techniques: Training designed to provide the student with the ability to competently use specific imaging equipment

- Knowledge of processes and relationships: Training designed to provide the student with an understanding of imaging technology and the ability to apply that technology to various applications
- Court procedures: witness testimony: Training designed to provide the student with the ability to present reliable imaging technology-based testimony in court
- Court procedures: case preparation: Training designed to provide the student with the ability to prepare and review accurate and reliable imaging technology-based evidence
- Continuing education: Training designed to provide the student with additional and updated training in imaging technologies
- Specialized applications: Training in specific disciplines or in specialized areas
- Proficiency: Proficiency training incorporates a number of components:
 - Required levels of skill and knowledge for a job category should be identified by the agency. These levels should be driven by the requirements of the specific tasks to be accomplished.
 - A course should be designed by the agency or its agent, to provide the skills and information necessary for the agency's personnel to attain competency in those skills
 - If determined to be necessary by the agency, a proficiency test should be developed and administered to test these skills.
 - Different levels of proficiency tests may be developed depending on the level of skill and experience of the personnel.

Categories of Users

- Management: Includes personnel who are responsible for setting agency policies and/or making budget decisions
- Command/Supervision: Includes personnel who supervise and/or direct personnel engaged in the use of imaging technologies
- Law Enforcement Officer: Includes personnel who use imaging technologies as a minor component of their routine duties. If the person is routinely involved in the basic photographic documentation of crime scenes, then this person would fall into the crime scene technician category

- Crime Scene Technician: Includes personnel for whom imaging is a major component of their routine duties. Crime scene technicians are divided into two categories. Level 1 technicians routinely perform only basic photographic or videographic documentation of crime scenes. Level 2 technicians routinely perform forensic photographic techniques, including specialized photography of impression evidence
- Criminalist/Examiner: Includes personnel for whom imaging is a major component of their routine duties. The personnel are not only responsible for the acquisition of images as a part of their duties but may also be responsible for the analysis of these images
- Photographer/Videographer/Specialist: Includes personnel for whom imaging is the major component of their routine duties
- Lawyer: Includes prosecutors and defense attorneys
- Judge: Includes personnel who are responsible for the acceptance or rejection of imaging technology-based evidence in court proceedings
- Legal Assistant: Includes personnel who are responsible for preparing materials that will be offered in court proceedings
- Trainer: Includes personnel who are responsible for providing instruction to others in imaging technology-related areas

Recommended Training Levels

Table 1 provides an assessment of the level of training necessary for each category.

	Awareness	Skills	Knowledge	Witness Testimony	Case Preparation	Continuing Education	Specialized Applications	Proficiency Training
Management	High	Low	Low	Low	Low	Low	Low	N/A
Command/Supervision	High	Low	Low	Medium	Low	Low	Low	N/A
Law Enforcement Officer	Low	High	Low	Low	Low	Medium	Low	Low
Crime Scene Technician	Low	High	Medium	High	Medium	High	Medium	Medium
Criminalist/Examiner	Low	High	Medium	High	High	High	High	High
Photographer/Videographer/Specialist	Medium	High	High	High	High	High	High	High
Lawyer	High	Low	Medium	High	High	Medium	Low	N/A
Judge	High	Low	Low	Low	Low	Low	Low	N/A
Legal Assistant	Low	High	Low	Medium	Medium	Medium	Low	N/A
Trainer	*	High	*	*	*	High	*	High

* This will depend on the levels of training and the needs of the students.

High - Training and testing are highly recommended for the user group

Medium - Training and testing are recommended for the user group

Low - Training and testing are desirable for the user group

N/A - not applicable

Topical Areas for Focused Training

The following section delineates specific topical areas in which user groups should receive focused training to effectively fulfill their imaging technology-related duties.

Managers, Commanders/Supervisors, Lawyers, and Judges (awareness and issues training)

- Status of imaging technology
 - Legal issues
 - Extent of use and who are the users
 - Industry and market trends

- Description of current technologies
 - Strengths and weaknesses of silver imaging
 - Strengths and weaknesses of digital imaging
 - Strengths and weaknesses of video imaging (analog and digital)
 - Current life cycle-cost comparisons and limitations
- Strategic alternatives for the agency
 - Determination of imaging needs
 - Sequence of equipment/software acquisitions
 - Actions to avoid or lessons learned
 - References/information sources

Legal Assistants (basic levels of skill for recording images)

- Working knowledge of the basic fundamentals of photography and/or videography
- Working knowledge of the capabilities and limitations of equipment
- Selection and operation of the appropriate cameras (digital, video, or film) and accessories
- Preparation of court presentations including images

Law Enforcement Officers (first responder)

- Operation of cameras with an understanding of the capabilities and limitations of the equipment assigned as a part of their routine duties
- Selection, framing, and composition of appropriate images
- Procedures for recording quality images in various situations
- Proper collection and preservation of the recording media
- Creation and maintenance of the chain of custody
- Demonstration of competency
- Demonstration of proficiency through testing

Crime Scene Technicians Level 1 (with video or adjustable still cameras)

- Basic levels of skill and knowledge for recording a crime scene
 - Various images to take
 - Set-ups for each type of image
- Working knowledge of the fundamentals of photography and/or videography
- Proper collection and preservation of the recording media
- Creation and maintenance of the chain of custody
- Working knowledge of the capabilities and limitations of equipment
- Selection and operation of the appropriate cameras (digital, video, or film) and accessories
- Demonstration of competency
- Demonstration of proficiency through testing

Crime Scene Technicians Level 2 (capable of training Level 1 crime scene technicians and law enforcement officers)

- Comprehensive knowledge of and experience in forensic photography techniques, such as
 - Retrieving impression evidence such as fingerprints and/or blood spatter
 - Selecting the appropriate film and equipment based on knowledge of the capabilities and limitations of the various aspects of imaging
 - Solving difficult non-routine imaging problems
- Awareness of film processing and image processing options; (i.e., the effects of the push process or contrast adjustments)
- Videography techniques (refer to LEVA Guidelines at www.leva.org)
- Knowledge of how to use the most common image processing tools and techniques
- Competency demonstration
- Proficiency demonstration through testing

Imaging Specialists

Personnel include photographic specialists, forensic scientists, and forensic video analysts. These personnel are capable of training law enforcement officers and Level 1 and Level 2 crime scene technicians.

- Working knowledge of how to use the various applicable aspects of the imaging chain
- Expertise in using techniques applicable to a particular discipline
 - Photogrammetry
 - Surveillance imaging
 - Frequency domain conversion; (i.e., Fast Fourier Transform filtering)
 - Alternate light sources and contrast filtering
- Demonstration of competency
- Demonstration of proficiency through testing

Trainers

- Classroom techniques
- Development of lesson plans
- Preparation of audio-visual materials
- Development of student exercises
- Selection of text books and reference materials
- Development of course exams
- Development of proficiency exams
- Development of course evaluation processes
- Demonstration of competency in subject matter
- Demonstration of proficiency in subject matter by testing

Issues to Consider when Addressing Training Needs

A number of issues should be considered when addressing an agency's training needs. The following section provides guidance for selecting training providers and addressing continuing education and testimony training needs.

Selecting a Training Provider

Course	Instructor	Equipment
Is a course outline provided?	What is the background and training of the instructor?	Does the training provider supply equipment for the training or must the students provide their own?
Is the course outline followed?	Is the training up to date? How has the instructor maintained proficiency in the field?	Is the course equipment offered by the provider sufficient to meet the agency's course objectives?
Does the course description include reference texts and other materials?	Can the instructor provide references?	Who provides the facilities, the agency or the training provider?
Does the trainer provide course evaluation forms, and are past evaluations available for review?	Is the training affiliated with professional, technical, or educational organizations?	Who provides the audio-visual equipment?
Is a course manual provided?	What is the instructor-to-student ratio?	Are course supplies provided by the training provider?
Does the provider offer certificates of completion?	What field expertise does the instructor have in the topical area?	
Can the course be customized to meet agency-specific needs?		
Does the class involve any testing?		
Are continuing education units offered?		
Can the training program travel or must the students travel to the instructor?		
For whom is the course intended?		
Course objectives		
Prerequisites		
Current courses		

Continuing Education

Continuing education can be obtained from training conferences, trade shows, and specialized courses. This training should address updates and the use of new imaging technologies such as:

- Equipment
- Software
- Imaging techniques applicable to law enforcement
- Scientific techniques beneficial to forensic imaging

Testimony Training

This training should address the use of image-based evidence in court such as:

- Lecture-type presentation relevant to court testimony
- Moot court
- Court monitoring

Reference List

SWGIT and SWGIT/SWGDE documents can be found at:

<http://www.theiai.org/swgit/index.html>

Section	Title
Section 1	Overview of SWGIT and the Use of Imaging Technology in the Criminal Justice System
Section 2	Considerations for Managers Migrating to Digital Imaging Technology
Section 3	Guidelines for Field Applications of Imaging Technologies in the Criminal Justice System
Section 4	Recommendations and Guidelines for Using Closed-Circuit Television Security Systems in Commercial Institutions
Section 5	Recommendations and Guidelines for the Use of Digital Image Processing in the Criminal Justice System
Section 6	Guidelines and Recommendations for Training in Imaging Technologies in the Criminal Justice System
Section 7	Recommendations and Guidelines for the Use of Forensic Video Processing in the Criminal Justice System
Section 8	General Guidelines for Capturing Latent Impressions Using a Digital Camera
Section 9	General Guidelines for Photographing Tire Impressions
Section 10	General Guidelines for Photographing Footwear Impressions
Section 11	Best Practices for Documenting Image Enhancement
Section 12	Best Practices for Forensic Image Analysis
Section 13	Best Practices for Maintaining the Integrity of Digital Images and Digital Video
Section 14	Best Practices for Image Authentication
Section 15	Best Practices for Archiving Digital and Multimedia Evidence (DME) in the Criminal Justice System
SWGIT/SWGDE	Proficiency Test Program Guidelines
SWGIT/SWGDE	Guidelines and Recommendations for Training in Digital and Multimedia Evidence
SWGIT/SWGDE	Recommended Guidelines for Developing Standard Operating Procedures
SWGIT/SWGDE	Glossary of Terms