

SCIENTIFIC WORKING GROUP ON IMAGING TECHNOLOGIES (SWGIT)

DRAFT GUIDELINES AND RECOMMENDATIONS FOR TRAINING IN IMAGING TECHNOLOGIES IN THE CRIMINAL JUSTICE SYSTEM

(Version 1.1 – February 2001)

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 recommendations and guidelines 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, the agencies should demonstrate and document that the selected training is adequate to meet their anticipated needs.

This document consists of five sections: (1) An introduction; (2) Definitions of the different categories of training and user groups; (3) Recommended levels of training for given user groups; (4) Topical areas that should be the focus of training activities for given user groups; and (5) Items to consider when addressing an agency's training needs.

Introduction

Personnel in the criminal justice system who utilize images must be aware of the capabilities and limitations of specific imaging technologies. Those engaged in the production or use of images should be aware of the procedures commonly utilized 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:

- Personnel engaged in the production of images should define and employ quality assurance programs to ensure the implementation of valid and reliable procedures adequate for the task.
- Personnel engaged in the production of images should maintain proficiency in their field by pursuing continuing education courses in imaging technology.
- Personnel engaged in production of images should maintain awareness of legal developments relating to the use of imaging technologies in the criminal justice system.

Categories of Training

Several categories of imaging technology training relevant to the criminal justice system are identified below.

- a. Awareness**
Training designed to provide the student with a general knowledge of the major elements of a given imaging technology, to include specific product capabilities.
- b. Skills and techniques**
Training designed to provide the student with the ability to competently use specific imaging equipment.
- c. Knowledge of processes and relationships**
Training designed to provide the student with an understanding of the imaging technology and the ability to apply that technology to various applications.
- d. Court procedures – witness testimony**
Training designed to provide the student with the ability to present reliable imaging technology-based testimony in court.
- e. Court procedures – case preparation**
Training designed to provide the student with the ability to prepare and review accurate and reliable imaging technology-based evidence.
- f. Continuing education**
Training designed to provide the student with additional and updated training in imaging technologies.
- g. Specialized applications**
Training in specific disciplines or in specialized areas.
- h. Proficiency**
Proficiency Training incorporates a number of components:
 1. 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.
 2. A course of study should be designed by the agency, or it's agent, to provide the skills and information necessary for the agencies personnel to attain competency in those skills.
 3. If determined to be necessary by the agency, a proficiency test should be developed and administered to test proficiency in these skills.
 4. Different levels of proficiency tests may be developed depending on the level of skill and experience of the individual.

Categories of Users

- a. Management**
Includes individuals responsible for setting agency policies and/or making budget decisions.
- b. Command/Supervision**
Includes individuals who supervise and/or direct personnel engaged in the use of imaging technologies.
- c. Law Enforcement Officer**
Includes individuals who utilize imaging technologies as a minor component of their routine duties. Note: If the individual is routinely involved in the basic photographic documentation of crime scenes, then this individual would fall into the category “Crime Scene Technician” (see below).
- d. Crime Scene Technician (CST)**
Includes individuals for whom imaging is a major component of their routine duties. Crime Scene Technicians are divided into two categories: “Level 1” CSTs routinely perform only basic photographic or videographic documentation of crime scenes; “Level 2” CSTs routinely utilize forensic photographic techniques, including specialized photography of impression evidence.
- e. Criminalist/Examiner**
Includes individuals for whom imaging is a major component of their routine duties. These individuals 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.
- f. Photographer/Videographer/Specialist**
Includes individuals for whom imaging is the major component of their routine duties.
- g. Lawyer**
Includes prosecutors and defense attorneys.
- h. Judge**
Includes individuals responsible for the acceptance or rejection of imaging technology-based evidence in court proceedings.
- i. Legal Assistant**
Includes individuals responsible for preparing materials that will be offered in court proceedings.
- j. Trainer**

Includes individuals responsible for providing instruction to others in imaging technology-related areas.

Recommended Training Levels

The following table provides an assessment of the level of training needed for individuals in each user category, broken out by type of training.

	Awareness	Skills	Knowledge	Witness Testimony	Case Preparation	Continuing Education	Specialized Applicat'ns	Proficiency Testing
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 - This training and testing is highly recommended for the named user group.

Medium – This training and testing is recommended for the named user group.

Low – This training and testing is desirable for the named user group.

N/A – not applicable

Topical Areas for Focused Training

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

Managers, Command, Lawyers and Judges

(Awareness and Issues Training)

1. Status of imaging technology
 - a. Legal issues
 - b. Extent of use and who are the users
 - c. Industry and market trends

2. Description of current technologies
 - a. Strengths and weaknesses of SI (silver imaging)
 - b. Strengths and weaknesses of DI (digital imaging)
 - c. Strengths and weaknesses of video imaging (analog and digital)
 - d. Current life cycle cost comparisons and limitations

3. Strategic alternatives for the individual agency
 - a. Determining imaging needs
 - b. Sequencing of equipment/software acquisitions
 - c. Actions to avoid or lessons learned
 - d. References/information sources

For Legal Assistants

- 1.** Basic levels of skill for recording images.
- 2.** A working knowledge of the basic fundamentals of photography and/or videography
- 3.** A working knowledge of the capabilities and limitations of equipment
- 4.** Selection and operation of the appropriate cameras (digital, video, or film) and accessories.
- 5.** Preparing court presentations, which include images.

For Law Enforcement Officers

(First responder)

1. Operation of cameras with an understanding of the capabilities and limitations of the equipment that they are assigned as a part of their routine duties
2. Selecting, framing and composing of appropriate images
3. Procedures for recording quality images in various situations
4. The proper collection and preservation of the recording media
5. Create and maintain the chain of custody
6. Demonstrate competence.
7. Demonstrate proficiency through testing.

For Crime Scene Technicians and Law Enforcement Officers-Level 1
(With video or adjustable still cameras)

1. Basic levels of skill and knowledge for recording a crime scene
 - a. Various images to take
 - b. Set-ups for each type of image
2. A working knowledge of the fundamentals of photography and/or videography
3. The proper collection and preservation of the recording media
4. Create and maintain the chain of custody.
5. A working knowledge of the capabilities and limitations of equipment
6. Select and operate the appropriate cameras (digital, video, or film) and accessories.
7. Demonstrate competence.
8. Demonstrate proficiency through testing.

For the Crime Scene Technicians-Level 2
(Capable of training Level 1 and Law Enforcement Officers)

1. Comprehensive knowledge of and experience in forensic photography techniques, such as:
 - a. Impression evidence such as fingerprints, and/or blood spatter.
 - b. Selection of the appropriate film and equipment based on knowledge of the capabilities and limitations of the various aspects of imaging. Solve difficult non-routine imaging problems.
2. Awareness of film processing and image processing options, for example, the effects of the push process or contrast adjustments.
3. Videography techniques. (refer to LEVA Guidelines at www.leva.org)
4. Know how to use the most common image processing tools and techniques.
5. Demonstrate competence.
6. Demonstrate proficiency through testing.

For the Imaging Specialist- 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.

1. Working knowledge of how to use the various applicable aspects of the imaging chain.
2. Expertise in using techniques applicable to a particular discipline, for example:
 - a. Photogrammetry
 - b. Surveillance imaging
 - c. Frequency domain conversion, for example, Fast Fourier Transform filtering.
 - d. Alternate light sources and contrast filtering.
4. Demonstrate competence.
5. Demonstrate proficiency through testing.

For Trainers

1. Classroom techniques
2. Development of lesson plans
3. Preparation of audio visual materials
4. Development of student exercises
5. Selection of text books and applicable reference materials
6. Development of in-course exams
7. Development of proficiency exams
8. Development of course evaluation processes
9. Demonstrate competency in subject matter.
10. Demonstrate proficiency in subject matter through testing

Training Considerations

A number of issues should be considered when addressing an agency’s training needs. The following provides some guidance for use in selecting training providers, as well as for addressing your continuing education and testimony training needs.

Some Issues To Consider When 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 your agency’s course objectives?
Does the course description include reference texts and other such materials?	Can the instructor provide references?	Who provides the facilities – your agency or the training provider?
Does the trainer provide course evaluation forms and are past evaluations available for review?	Is the training affiliated with any 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 your agency-specific needs?		
Does the class involve any testing?		
Are continuing education units offered?		
Can the training program travel or must you travel to the trainer?		
For whom is the course intended?		
Course objectives		
Prerequisite		
Current courses		

Continuing Education

Continuing education training can readily 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;

1. Lecture type presentation relevant to court testimony
2. Moot court
3. Court monitoring.