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## Section 2

### *Considerations For Managers Migrating to Digital Imaging Technology*

#### **Introduction**

This migration to digital still imaging technology may significantly affect current work processes and should be done only after examining current operation procedures and completing a needs assessment. This should involve the participation of the organization's imaging and/or subject matter experts.

#### **Needs Assessment<sup>1</sup>**

- Prior to selecting digital imaging technology, current practices must be examined to determine if there is a need to replace or enhance existing technology.
- Consideration should be given to the use of film-based, digital, and emerging technology, each to its best advantage, or in synergistic combination.

#### **Cost Analysis<sup>1,2,3</sup>**

- Prior to selecting a digital imaging system, a cost-benefit analysis must be conducted to determine the cost justification of a system purchase and to determine the possible advantages and disadvantages to the agency with its implementation.
- This analysis would allow a financial comparison between the current and proposed imaging systems to make a procurement decision.
- To determine a cost estimate, the following components should be considered: system hardware, software, and maintenance; application software; communications hardware and software; training; proficiency testing; project management; facilities upgrades and site preparation; and staffing and miscellaneous costs.
- Typical cost justifications focus on film and photographic processing, equipment acquisition and changes in labor. Other factors included the following major areas: a study of current operations, proposed system architecture, financial indicators; including a payback period.
- Many agencies experience great savings through the ability to quickly and economically output and distribute images in digital form. Many of these savings are in the form of greatly reduced image printing.

- Managers should be aware of the recurring costs associated with maintaining and upgrading imaging systems. Unless these costs are factored into the budget, the system is in danger of becoming obsolete. Some agencies annually budget approximately 15 percent of the original system acquisition cost for upgrades, training, and maintenance.
- Each of the following items will have some impact on costs.

### ***Image Quality and Storage*<sup>1,4,5</sup>**

- When determining resolution requirements, the intended usage, data storage requirements, and the need for accurate reproduction of the image must be considered.
- Original images must be preserved.
- The selection of a storage media may depend on budget considerations for the agency. Each has its own advantages and disadvantages.
- Image compression affects storage requirements and should be considered carefully.
- Lossy image compression, such as JPEG, can result in the loss of critical details. The use of this type of compression may render an image unsuitable for forensic analysis.

### ***Equipment Evaluation***

- Information used to evaluate suitability of new imaging technology should include feedback from agencies currently using the equipment in similar applications, product reviews, and vendor specification sheets.
- Prior to making a final selection, require a demonstration of new imaging technologies using representative samples of caseworks.
- Do not rely solely upon prepackaged demonstrations.

### ***Standard Operating Procedures (SOPs)*<sup>6</sup>**

- SOPs must be developed to ensure consistency, quality, integrity, and repeatability of the process.
- A staff member should be responsible for the overall project management, system administration, maintenance, and updating of the SOPs.
- It is the responsibility of a staff member, rather than vendors and manufacturers, to maintain written documentation of system procedures and SOPs, including access and security policies and procedures.

## **2 Consideration for Managers**

This document includes a cover page with the SWGIT disclaimer

## ***Training<sup>2,7</sup>***

- Initial and continuing training in imaging technology is required.

## ***Legal Considerations***

- Review of SOPs by departmental counsel or prosecutors may be helpful.
- Personnel should be familiar with how the rules of evidence apply with respect to the admissibility of evidence and expert testimony.

<sup>1</sup>See SWGIT *Guidelines for Field Applications of Imaging Technologies in the Criminal Justice System*

<sup>2</sup>See SWGIT *Guidelines and Recommendations for Training in Imaging Technologies in the Criminal Justice System*

<sup>3</sup>See SWGDE/SWGIT *Proficiency Test Program Guidelines*

<sup>4</sup>See SWGIT *Guidelines for the Use of Imaging Technologies in the Criminal Justice System*

<sup>5</sup>See SWGIT *Recommendations and Guidelines for the Use of Digital Image Processing in the Criminal Justice System*

<sup>6</sup>See SWGDE/SWGIT *Recommended Guidelines for Developing Standard Operating Procedures*

<sup>7</sup>See SWGDE/SWGIT *Guidelines & Recommendations for Training in Digital & Multimedia Evidence*

## **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