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Section 2

Staying Current in Digital Imaging Technologies: Considerations for Managers

***Previously released as "Considerations For Managers Migrating to Digital Imaging Technology" ***

Introduction

Advances in digital imaging technologies often lead to changes in work processes and training requirements. Whether migrating from film or upgrading existing digital imaging technologies, these changes should be done only after examining current operating procedures and completing a needs assessment. This should involve the participation of the organization's imaging and/or subject matter experts.

Needs Assessment¹

- Prior to selecting any digital imaging technology, current practices should be examined to determine if there is a need to replace or enhance existing technology.
- The ability to make use of archived images (e.g., negatives, media, file formats) needs to be considered.

Cost Analysis^{1,2,3}

- Prior to selecting an imaging system, a cost-benefit analysis should 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.
- The analysis must consider every relevant step of the imaging chain: acquisition/capture; transmission; storage; processing; archiving and retrieval.
- To determine a cost estimate, the following components for each step of the imaging chain should be considered: hardware; software; maintenance; security; training; facilities upgrades; site preparation; staffing and consumables.
- 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.

Image Quality and Storage^{1,4,5,9}

- When determining resolution requirements, the intended usage and data storage requirements should be considered.
- The selection of a storage media may depend on file size, the number of files, the length of time the files are to be retained, the storage media, the archiving system, and the integration with existing systems.
- Image compression can affect image quality and should be considered carefully.

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, request a demonstration of new imaging technologies using representative samples of casework and do not rely solely upon prepackaged demonstrations.

Standard Operating Procedures (SOPs) and Training

- SOPs must be developed to ensure consistency, quality, integrity, and repeatability of the process.
- Staff should be trained to competency in photography, all imaging equipment, hardware, software, and processes to include SOPs.
- Continuing training in imaging technology and processing is required.

Legal Considerations⁸

- Review of SOPs by departmental counsel may be helpful.
- Personnel should be familiar with how the rules of evidence apply with respect to the admissibility of evidence and expert testimony.
- Case law supports the admissibility of digital images on the same principles as film-based images. For details, in your jurisdiction, consult with your local legal counsel.

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

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

³See SWGDE/SWGIT *Proficiency Test Program Guidelines*

⁴See SWGIT *Overview of SWGIT and the Use of Imaging Technology in the Criminal Justice System*

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

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

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

⁸See SWGIT *Digital Imaging Technology Issues for the Courts*

⁹See SWGIT *Issues Relating to Digital Image Compression and File Format*