An Introduction to SDFI-TeleMedicine

Secure Digital Forensic Imaging – Secure Beyond Reasonable Doubt!®

Prepared For Police and Prosecutors
• Research and Development began in 2001 and continues today.
• The first SDFI-TeleMedicine System was purchased and installed in September/October of 2005.
• SDFI Systems are in place at approximately 200 locations throughout the nation.
• SDFI has trained almost 2000 system users and provides technical support, at no cost, to all users provided the system is used for legal and/or medical reasons.
• The SDFI System was specifically designed around the Federal Rules of Evidence, to be used in both the medical and legal communities.
Article - Introductory Section

G.S. 8C-1 § 8C-1. Rules of Evidence.
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CONTENTS OF WRITINGS, RECORDINGS AND PHOTOGRAPHS

G.S. 8C-1001 through to G.S. 8C-1008

(1) **WRITINGS AND RECORDINGS.** “Writings” and “recordings” consist of letters, words, sounds or numbers, or their equivalent, set down by... photographing, magnetic impulse, mechanical or electronic recording, or other form of data compilation.

(2) **PHOTOGRAPHS.** “Photographs” include still photographs, X-ray films, video tapes, and motion pictures.

(3) **ORIGINAL.** ...If data is stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an “original.”
Rule 1002 Requirement of Original

To prove the content of a writing, recording, or photograph, an original is required, ...

Rule 1003 Admissibility of Duplicates

A duplicate is admissible to the same extent as an original unless (1) a genuine question is raised as to the authenticity of the original or (2) in the circumstances it would be unfair to admit the duplicate in lieu of the original. (1983, c. 701, s. 1.)

These rules are as strong as The Federal Rules of Evidence
• All SDFI Camera Systems create both a RAW and a JPG when an image is captured.
• Raw files are the image originals where JPG files are highly compressed and processed copies.
• Raw files are, by definition, unalterable (read-only) file formats. *(See Digital Image Integrity, Adobe Systems)*
• Use the JPG file unless challenged on its authenticity, then produce the RAW file.
Primary Function

- To assist with photodocumentation related to:
  - Security - Chain of Custody
  - Self-Directed Violence
  - Interpersonal Violence
  - Collective Violence
  - Mass Disaster (man-made and natural)

Secondary Function

- To assist with photodocumentation processes and procedures.
“...we have had a significant increase in cases being settled before trial."

"We had 2 cases where a SANE expert, who was hired by the defense, reviewed our photos and documentation and did not find fault with them."

"These 2 cases resulted in a guilty plea and resolution before trial."

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Detective A.G. Samples says -

“Lori was the one who took the forensic photographs of the victim’s injuries. There is no doubt that Lori’s photographs and testimony in court assisted us greatly in receiving a conviction in Marsh’s case. He was a violent habitual felon and received two life sentences.”

“The Jurors were interviewed when the trial was over and several of the jurors mentioned that they liked Lori and that her photographs and testimony impacted their decision.”
"In 2015, we saw over 1,500 forensic/medical cases that we assessed and documented."

"These cases, including kidnappings, strangulations, sexual assaults, interpersonal violence, child abuse/neglect, elder abuse/neglect, law enforcement injuries, and other abuse/assault related injuries, were all photographed."

"I have also testified as to the SDFI Negative Invert Filter multiple times. One case was challenged at the California supreme court level and it held up."

Mary Reina MSN, RN, SANE-A, SANE-P
Forensic Services Unit (FSU) Director
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“The SDFI Telemedicine System allows for my team to be completely mobile.”

"We are able to respond to any of our System's 15 facilities and perform the medical-forensic exam in any venue. The TeleMedicine System makes it so easy to get information to law enforcement and the attorneys on the case.

"The ability to encrypt any file gives me peace of mind knowing that the files are totally secure when they are sent."

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• SDFI uses federally approved software encryption certified for use in protecting classified information.

• SDFI encrypts at 256-bit AES and then again, separately, on the SDFI File Transfer Portal.

• No one can access the secured data without the correct passphrase, not you, not your I.T. and not SDFI.

• What does this all mean?
  • An absolute Chain of Custody.
  • The digital evidence is 100% secured.
  • SDFI-Telemedicine is: “Secure Beyond Reasonable Doubt”®.
A THREE STEP PROCESS FOR L.E. AND THE D.A.

**Click** Click on the SDFI-TeleMedicine download link.

**Save** Save the secure/encrypted images to your computer.

**Call** Call the sender for your long passphrase.
• There are no costs for recipients.
• SDFI User Guides are offered for free.
• Remote training is offered for free.
• Technical support is offered for free.
• Related information is offered for free.
• SDFI web site access and PDFs are free.
• Nothing needs to be installed on your Windows computer for SDFI to work.
• Your existing Internet connection is used to download SDFI Secure Files.
• SDFI is NOT “The Cloud” or “Cloud Based”. ((The Cloud is NOT Secure!!))
• All evidence is fully encrypted before, during and after transfer.
• Evidence is NEVER attached to E-Mail!
Yellow Intelligent User Guide

A Guide To Downloading SDFI Secure Files

* This Guide Is Not For Independent Sale *

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How to Click, Save & Call

Click

Yellow Download Guide!!

How to Click, Save & Call
Call
Digital Image Resolution

What Is It?
Image resolution is the amount of image data captured. The higher the resolution, the more image data captured.

1024x768 = 786,432 pixels.  
(Old computer screen resolution).

1920x1080 = 2,073,600 pixels.  
(Home TV Screen resolution).

5472x3648 = 19,961,856 pixels.  
(SDFI Camera System image resolution).
• Digital image resolution is NOT focus.
• Digital image resolution is NOT clarity.
• Digital image resolution is NOT quality.

A person can capture a high resolution image that is out of focus, has poor overall clarity and is considered to be bad quality.
Reviewing Digital Images

How?
Reviewing Images

• Review images on a computer.
• Review images at 100%.

100% means one image pixel to one screen pixel*.

* Pixel = Picture Element
Same Image Shown At 100%!
Contrast Filters

What Are They?
Contrast filters, help you see better. That’s it!

They don’t add or take anything away from the subject itself. Filters draw attention to detail, like a yellow highlighter does on paper.

Contrast filters make it easier to see and find existing detail in an image.
Filters “**ONLY**” help you see better, like a pair of sunglasses.

- Filters do **NOT** determine intent or cause.
- Filters do **NOT** determine consent or non-consent.
- Filters do **NOT** determine guilt or innocence.
- Filters do **NOT** diagnose or analyze.
- Filters do **NOT** distinguish right from wrong.
More Contrast Filter Examples

X-RAY
ARTICLE 10

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Melody Buba
SWGIT Chair
Electronics Technician at the Federal Bureau of Investigation

Digital Imaging Technology Issues for the Courts
MYTH: Filtered images should not be admissible.

FACT: Filtered images that reveal features that exist in the image but are not immediately apparent through visual examination have historically been found to be valid and admissible evidence in courtroom proceedings. Case law supports the admissibility of filtered images. Both Frye and Daubert challenges to the use of this technology have been resolved in favor of admission of filtered images.
RELEVANT/RELATED CASE LAW

CASE: US v. Mosley, 35 F.3d 573 (9th Cir 1994)
CASE: Dolan v. State, 743 So. 2d 544 (Fla. App. 1999)
CASE: State v. Hartman, 93 Ohio St.3d 274 (Ohio 2001)
CASE: State v. Swinton, 847 A.2d 921 (Conn. 2004)

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Digital Filter Examples

Always Show the Filtered Image Beside the Original Image
Digital Filter Examples

Original

Filtered

Always Show the Filtered Image Beside the Original Image
Digital Filter Examples

Original

Filtered

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Digital Filter Examples

Original

Filtered

Always Show the Filtered Image Beside the Original Image
✓ SDFI Camera Equipment
   • Warranty
   • Technical Support
   • Loaner Camera System Program

✓ SDFI Image Management Software
   • Technical Support
   • User Guides

✓ SDFI Telemedicine Portal
   • FREE, NO COST recipient/receiver support including telephone, e-mail and remote computer support, if permitted.
Downloads: SDFI®-TeleMedicine's SoftSecrets®

(A current version of Adobe Reader is recommended.)

This website is constantly being updated. Check back in for updates regularly.

- SDFI LE and DA Presentation for North Carolina (Expires Dec 22, 2016)
- Download Everything On This Page as a .ZIP File
- SDFI’s Non-Fatal Strangulation Protocol 2017
- SDFI Technical Requirements 2016
  - SDFI General System Security 2016
  - SDFI’s White Reference Guide 2016 - (Includes all references)
- Using SDFI’s Negative Invert Filter In Court 2016
  - Learn About SDFI’s Negative Invert Filter 2016 (Includes image examples)
  - SDFI’s Blue Negative Invert Filter Guide 2016 - (A How To Guide)
Questions?

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