



# The History, Evolution and Standardization of SDFI's Forensic Photography Photo Documentation Protocol<sup>(1)</sup>

## History:

Jeannie Stephenson, a SANE Nurse in Los Angeles, California was the first person to adopt SDFI's Overlapping Storyboard concept, sometime between 2003 and 2005.

In 2005, colposcopes and point and shoot film cameras and/or instant cameras were being utilized by forensic nurse examiners (FNE's) to photograph patients who had experienced a sexual assault. FNE's would take pictures from head to toe including anal, oral, penile and vaginal images that would ultimately be used by the Sexual Assault Response Team (SART). The Sexual Assault Response Team (SART) is comprised of medical professionals, law enforcement, legal and technical professionals that are trying to solve a crime related to sexual assault event.

## Medical Needs:

The Federal DOJ definition of the term "Forensic Medical Exam" of a "Forensic Medical Examination" means an examination provided to a victim of sexual assault by medical personnel to gather evidence of a sexual assault in a manner suit-able for use in a court of law". The definition of the term includes a, "Head-to-toe examination of the patient".<sup>(2)</sup>

## The Gap:

To achieve this in 2005, FNE's used colposcopes along with disposable point and shoot cameras that produced very poor quality images at the time. Many FNE's were limited on how many pictures they could take during an exam primarily due to the cost. Rolls of film were cheaper but had to be developed at additional costs. Polaroid, although instant, did not match film quality and they costed more than film. At that time, many FNE's had to budget one roll of film and/or one pack of Polaroid, limiting their ability to photodocument effectively. In response, FNE's did the best they could in the exam room with what they had. In most cases, the examiner's photographic needs were typically limited by funding.



Between 2000 and 2005, digital cameras were starting to become popular. With a digital camera, a FNE could take an unlimited number of pictures that were higher resolution and better quality. No more rolls of film, developing costs or instant photos were necessary. Although digital solutions seemed to be the complete answer, it did not come without challenges.

The introduction of SDFI's Forensic Camera Systems allowed FNE's to take an unlimited number of very high quality digital photographs, however, there was no standard for FNE's to use at the time. In an effort to promote SDFI Systems, SDFI developed and introduced the "Overlapping Storyboard" concept to the SART groups who were practicing in the city of Los Angeles, California at the time.

The challenge in 2005 was to meet the needs of this diverse support team (SART), each with their own needs and goals, each independently paid to do a job on behalf of either the victim or a suspect(s), something that proved to be extremely difficult. Each support team asked for different photographic perspectives based on their own needs so SDFI started with federal court requirements and worked backwards towards the beginning and began with The Federal Rules of Evidence.<sup>(3)</sup> SDFI presented solutions to each SART member based on meeting the needs of the Federal Rules of Evidence, going around and back to each SART member and making changes until each support team agreed with the solution. Thus the Overlapping Storyboard was born.

The Overlapping Storyboard is a concept that is not linked to the type of camera system and is available at no cost to anyone who wants it. Forensic Overlapping Storyboard Photography continues today and is solely based on input from forensic examiners who are medically trained to serve victims of sexual assault, law enforcement professionals who investigate sex crimes, various members of the U.S. court system and most importantly, it continues to follow The Federal Rules of Evidence.

Another concept that assisted with the development of the Overlapping Storyboard is the "The Rule of Three's". This came from Polaroid and their Macro 5 SLR, a film camera that had just five settings. They were: 0.2x, 0.4x, 1x, 2x, and 3x. This was one of the original camera systems being used during forensic exams, where examiners were taught to take one picture at 0.2x, one at 1x and one close-up at 3x. One picture taken "far-away", the next taken about half way closer to the subject and then a third, close up.



Unfortunately, this rule only covered a single area of interest<sup>(4)</sup> and the Polaroid Macro 5 camera could not effectively be used to take pictures from head to toe or other various photographic angles so Polaroid also sold a Polaroid Spectra Point and Shoot camera to forensic programs around the nation. More importantly, The Rule of Three's could not cover or address the needs of the U.S. Federal Court System as it related to digital images.

Expanding on the Rule of Three's, SDFI introduced extreme close-up shots within the Overlapping Storyboard and shots, with and without scales, as a solution to meet the need of the Sexual Assault Response Team (SART). When SDFI Camera Systems started to replace colposcopes in 2005, they also replaced disposable point and shoot film cameras and/or Polaroid instant film. This one new forensic photographic tool replaced the other two or three camera systems almost overnight. For the first time, a FNE could use one camera system to do two or three jobs and get high diagnostic quality results instantly. This, combined with the workflow process of capturing an Overlapping Storyboard through a protocol that anyone could use, was a winning concept for the entire SART. For the first time, the forensic photographs captured during an exam, were consistently clear and in focus, they were not too light and not too dark, they were aligned and not twisted, and the series of overlapping storyboard pictures represented the subject matter.<sup>(5)</sup>

Forensic overlapping storyboards became a standard when high-end secure digital forensic camera systems evolved partly because there was a real concern that digital images could be altered and/or used inappropriately. If digital images could be easily altered, then their authenticity could be challenged in court, possibly limiting their intended use. According to the Federal Rules of Evidence, the original must be available to present if challenged in court.

An Overlapping Storyboard is an image capture process that proves beyond reasonable doubt, that if one photograph is challenged, then all must be challenged. By overlapping or "linking" the images together, it makes it extremely difficult to misrepresent any one of them. A person simply can look at a series of overlapping storyboard pictures and see an area of interest through each shot and compare them with others within the series, and be able to determine if an image is being misrepresented.

15 years ago, SDFI was concerned that without a written and proven digital photographic standard that could be used in both the field and referenced in court, that digital images



captured in the field by FNE's might be dismissed if they were not consistent or captured, following a standard designed for new digital imaging technologies.

What was needed was a digital photographic standard that fulfilled the fundamental elements of The Federal Rules of Evidence and achieved everyone's needs.

By defining a forensic overlapping storyboard image capture process that includes capturing both RAW and JPG file types, and includes a clearly written protocol on how to capture forensic images during a forensic examination, SDFI inadvertently created a generic tool that can be used and referenced by anyone to prove forensic digital images are original and consistent.

Continued use of the process and the protocol ensures that all members of the Sexual Assault Support Team get images that are useful to the work each does on behalf of sexual assault victims. Ultimately, SDFI succeeded in creating a standard that is known as "SDFI's Forensic Photography PhotoDocumentation Protocol", a protocol that includes detailed instructions on how to capture overlapping storyboard images.

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- (1) [https://www.sdfi.com/downloads/SDFI\\_Digital\\_Protocol.pdf](https://www.sdfi.com/downloads/SDFI_Digital_Protocol.pdf)
- (2) <https://www.govinfo.gov/content/pkg/CFR-2017-title28-vol2/pdf/CFR-2017-title28-vol2-sec90-2.pdf>
- (3) <https://www.uscourts.gov/rules-policies/current-rules-practice-procedure>
- (4) An "area of interest" is an area on the body of a SA victim that an FNE identifies during a SA exam.
- (5) <https://pubmed.ncbi.nlm.nih.gov/22123038/>