C30 A Technique For Reducing Flash Glare for the Forensic Photographer

Joe P. Anderson, BFA, Harris County Institute of Forensic Sciences, Houston, TX 77054; Dustin C. Hatfield, MA, Harris County Institute of Forensic Sciences, Houston, TX 77054*

Learning Overview: The goal of this presentation is to highlight a photographic technique for capturing subtle detail by reducing glare within forensic applications.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating a photographic technique that can be employed to more accurately document difficult-to-capture details, often obscured by flash glare.

The Digital Single Lens Reflex (DSLR) camera and accompanied flash unit are tried-and-true equipment used during forensic science applications to document subject matter pertinent to a forensic investigation. Quite often investigators will strap on a digital camera and flash and click away, believing they are photographically documenting the scene or subject in the most true and accurate way possible. For many scenarios, this may be true, but in certain situations, the powerful, direct light from a flash will obscure subtle detail that may be relevant to a medicolegal death investigation by causing glare or hotspots on the resulting image.

Properly illuminating subtle findings on darker skin colors, particularly non-flat and spherical surfaces, can be especially difficult with a standard flash unit because of reflection causing glare and hotspots. Simply removing the flash unit from the camera and employing off-axis lighting will not suffice in fully capturing the subject as a whole. Examples of this that come up quite often are bruising and other defects of the head and very small particles (such as gunshot residue) deposited on curved surfaces of the body.

A technique used at the Harris County Institute of Forensic Sciences to accurately document subject matter where photographic flash may obscure the element of importance is to remove the flash unit, significantly increase the International Organization for Standardization (ISO) (sensor sensitivity to light), adjust the white balance appropriately, and use the digital camera's internal light meter for proper exposure. By increasing the ISO, the photographer is able to utilize ambient light to obtain the correct exposure without the aid of a tripod, saving precious time and avoiding precarious tripod positioning. A potential limitation of this technique is diminished resolution quality; depending on the ISO setting, increased pixel noise can result in a "softening" of the overall focus. This trade-off can be justified when used as needed, in conjunction with flash photography to illuminate the subject at hand. When removing the flash unit from the equation, the photographer is reliant upon ambient light to illuminate the subject, which may need to be corrected for in the white balance settings. While using only ambient light, the technique of transillumination (using the light transmitted through the subject from behind to illuminate the area of focus) may also be employed if appropriate. This technique may be relevant in photographically documenting deep tissue hemorrhage when bruising on the surface of the skin is less apparent.

Being able to accurately document and demonstrate key findings is essential in the field of forensic science. By minimizing glare and depicting the subject matter more accurately in resulting images, the photographic documentation becomes a more reliable and complete record. A forensic photographer in the field can use this simple technique to better visualize findings as applicable.

Forensic Photography, Flash Glare, ISO

*Presenting Author