



Criminalistics Section – 2005

B55 ESCRIME: A New Software for Bloodstain Pattern Analysis in 3-Dimensions

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The goals of this presentation are to explain the possibilities and the use of a software created to reconstruct 3-D trajectories of bloodstains at crime scene.

This presentation will impact the forensic community and/or humanity by presenting a new tool to deal with bloodstain pattern analysis at the crime scene.

Today, bloodstain pattern analysis is a fully recognized forensic discipline. The shape of stains assists investigators in determining the point of origin when locating the victim and the assailant during the bloodshed. The data obtained are very helpful to confirm witnesses or suspects statements and to support the investigators assumptions.

The forensic science laboratory of the French Gendarmerie and Marne La Vallée computer University created a new software called ESCRIME. The function of ESCRIME is to assist investigators with the interpretation of bloodstain patterns by bringing together three functions.

The first one is to create a virtual 3-D crime scene according to the real furniture and different textures observed. It is possible to know very precisely (within millimeters) the exact location of each item.

The second deals with the exploitation of the pictures of bloodstains. It is important to extract exact information and to measure a stain and locate it at the scene.

The third one allows the software to calculate the half plan the stain pass by and to determine point of convergence. The user can easily move inside the crime scene to obtain different views in 3-D.

The authors will present real cases using the software in real time. ESCRIME is not only useful for bloodstain pattern analysts but also for other crime scene specialists, and can help to present cases to the court.

Bloodstain Pattern Analysis, Computer Analysis, Crime Scene Reconstruction