



## Criminalistics Section – 2011

### A99 Continuing Education for Forensic Professionals Through Virtual Crime Scene Assessments

Ryan J. Postlethwait, BS\*, West Virginia University Forensic & Investigative Science, 208 Oglebay Hall, 1600 University Avenue, PO Box 6121, Morgantown, WV 26506; and Martin K. Overly, MSFS\*, and Brandon D. Smithson, BS, Forensic Science Initiative - West Virginia University, 208 Ogelbay Hall, 1600 University Avenue, PO Box 6217, Morgantown, WV 26506

The goal of this presentation is to demonstrate an interactive, virtual crime scene, as part of an online course and its validity for training. Discussion will relate to the benefit of training through an online medium and how such a training format gives the student a practical experience. While replicating onsite training and education is challenging, a thorough presentation of virtual crime scenes is a move toward the enhancement of online training.

This presentation will impact the forensic science community by demonstrating to working professionals the value of virtual crime scene training when it is used in addition to other training platforms.

Recommendations in the National Academy of Sciences (NAS) report address the needs of forensic professionals to have continuing education and training in forensic science. Included in the report is a recommendation given by the Technical Working Group for Training and Education in Forensic Sciences (TWGED). The efforts of TWGED discuss training content and how it should include a combination of essential topics and elements specific to forensic disciplines. One critical area requiring training is crime scene processing. Because evidence collection and preservation is central to the investigative process, it is beneficial for professionals across various disciplines to understand crime scene collection, preservation, and processing. Crime scenes in an academic context, however, are difficult to reproduce, manage, and distribute to students over wide geographical areas. A virtual crime scene provides students the advantage to further comprehend crime scene procedures in an accessible format. This is accomplished by demonstrating collection and preservation methods as they are published in crime scene literature as well as the National Institute of Justice (NIJ) and Federal Bureau of Investigation (FBI) research reports on crime scene investigation.

A panoramic video system captures a complete view of an area, such as a crime scene, without manually "stitching" individual photographs together. The 360° area can be viewed from above, below, and at eye level in relation to the viewer. After the scene is captured visually, the views are then combined with correlative software and links to evidence, objects, or locations can be embedded within the scene. Students choose collection and processing methods appropriate for the given evidence. For example, one of several presumptive tests can be selected for a suspected bloodstain. Other options include, but are not limited to, the Electrostatic Lifting Apparatus (ESLA), alternate light source (ALS), and camera setting adjustments for crime scene photographs. During the experience, the student maintains a crime scene notebook, which is embedded in the online course. The notebook is used to document their work, organize the crime scene, and maintain a chain of custody.

Certainly, some forensic professionals are skeptical when a virtual crime scene is used for training purposes. Academic programs, certification tests (i.e., IAI, ABC), and on-site trainings, such as National Institute of Justice (NIJ) sponsored programs, are the core of continuing education. Online courses and the virtual crime scene, much like on-site courses are only as good as the content and the depth of learning a student gains from the experience. Fortunately, the advancement of video and graphic design software gives online courses the potential to emulate training formats commonly used in forensic science. In addition, virtual, interactive training is an effective way to obtain low-cost continuing education while performing job related responsibilities and managing casework.

#### Training, Virtual, Crime Scene