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President's Message

Greetings, I hope this finds you all well.

As I sit and type this letter to all of you on this warm August day, I look back over the first portion of this year in amazement at all your Board has accomplished on your behalf.

- We are in the final stages of the change to a new IABPA website that will have new features beneficial to all of us.
- You will be voting on brand new Bylaws.
- The ethics policy is ready to go.
- The JOURNAL is off the ground.
- The Dan Rahn Grant wording is solid and complete.
- Work is being done on the educational aspect of BPA.
- The certification issue is advancing forward.

None of this could be done without the hard work of a very dedicated group of people.

The conference is just around the corner, registrations continue to flow in. I promise another quality filled conference and, of course, some wonderful cuisine. If anyone has any questions about places to visit, please send me an e-mail. Milwaukee and the surrounding areas have much to offer. Please consider submitting your presentation for peer review and publication in our Journal of Bloodstain Pattern Analysis.

If anyone has any questions or comments for any of us, please feel free to email or call anyone of us. We are here to serve you, the members of the IABPA.

Blessings,

Todd

Calculating the Area of Origin of Spattered Blood on Curved Surfaces

Terry Flippence and Christopher Little
New South Wales Police Force

Abstract

A procedure is described for calculating the area of origin of spattered blood on curved surfaces. Previously, area-of-origin calculations of spattered blood could be made using blood on flat horizontal or vertical surfaces. By using highly accurate three-dimensional scanning hardware and software, area-of-origin calculations can be achieved from spattered blood on flat angled surfaces and mildly curved surfaces.

Introduction

The calculation of areas of origin is a tried and tested method of mathematically calculating the location of the source of spattered blood patterns in three-dimensional space. This calculation can be made in a number of ways. All methods use the measurement of the width and length of five or more well-spaced and defined spattered stains. A basic trigonometric calculation is then obtained to show the origin of the stain. This method is limited to flat vertical and horizontal surfaces.

On the 6th of August 2007, a vehicle collision occurred where the driver, Mr. X, collided into a large tree on Tweed Valley Way, Mooball, New South Wales. The front seat passenger was the driver's estranged wife, Mrs. X. The vehicle, a VS Holden Commodore sedan, was owned by Mrs. X. She was not wearing a seatbelt at the time of the collision and, on colliding into the tree, in turn collided into the vehicle's windscreen. An off-duty nurse, hearing the collision, attended the scene immediately after the collision and rendered aid to Mrs. X, hearing her last breaths before expiring a short time later. Bloodstaining was evident on the deceased and throughout the interior of the vehicle. The deceased had several facial lacerations that were inconsistent with a motor vehicle collision.

An investigation into the collision was initiated, with the vehicle being towed for further examination. Twenty-two items were collected from the vehicle, including the windscreen *(fibreglassed on the external side to hold its shape)*, front passenger's window and door, front passenger's seat, and seatbelt, all of which had spattered bloodstaining on them. The forensic examinations of these items noted evidence leading to the deceased being assaulted and bleeding in the vehicle prior to the collision. An area of origin calculation was completed from spattered bloodstaining on the inside of the windscreen and front passenger's window. A three-dimensional laser scanner (coupled to a computer) was used to accurately scan selected blood spatters on both glass surfaces. The windscreen surface was biconcave and the front passenger's window was concave, whilst both windows were angled significantly from the vertical and horizontal.

Method and Materials

An initial nine validation experiments were completed to test the workability and accuracy of area-of-origin calculations on curved surfaces. For this, bull's blood was sourced from a local abattoir and EDTA was added as the anti-coagulant to prevent the blood from clotting. A VS Commodore windscreen and front passenger's window were sourced, and two steel frames were constructed to hold the windscreen and front passenger's window at the same angle as they are when in the vehicle (Figure 1). A smart level (digital spirit level) was used to measure the accuracy of the angles of the windows.

A hammer was constructed to project the bull's blood from a known point of origin, which was measured in for each experiment from 6 reference points placed on each window. Three different points of origin were used for the nine experiments.

Five millilitres of blood (at 37 degrees centigrade) were deposited onto a hockey puck, which was used as the base for the hammer. The hammer was lifted and allowed to fall onto the puck, and then blood was projected onto the inner sides of the windows to form blood spatter patterns with stain sizes of between two and ten millimetres in length).

Figure 1.Windscreen and front passenger's window of VS Holden Commodore, *in-situ* as they appear in the vehicle, held with frames and showing the hammer in foreground.

The FARO Laser ScanArm® is a highly accurate (within of 1/50th of millimetre) digital scanner, which scans physical surfaces and converts them into three- dimensional digital data that can be used in engineering and architectural computer programs such as AutoCad® and Solidworks®. The scanner can differentiate between colours on a surface and uses both a 'barcode' type laser to scan surfaces without physically contacting the surface, and a tip to set benchmarks and reference points (point-scan) from surfaces. Both types of scanning were used in these experiments. The scanner is set on a tripod base and can extend outwards from this base a distance of 2.5 metres in all directions.

The windscreen and front passenger's window were inspected, and numerous appropriate blood spatters were identified. Using the FARO Laser ScanArm®, these spatters were scanned and the perimeter of the window was point-scanned (Figures 2-4). The windows were then cleaned with water and wiped dry (using no chemicals). This process was repeated for the front passenger's window. All information was downloaded as data into the AutoCad® program.

Figure 2. View of operator (Little) scanning in spattered bloodstains using FARO Laser ScanArm®.

Figure 3. View of operator (Little) using the laser function of the Scanarm® to scan blood stains.

Using area-of-origin calculations, area-of-origin lines were projected from the blood stains (Figures 5-13). The area of origin of the hockey puck was placed into an AutoCad computer representation of the scene. This same process was repeated for all nine experiments.

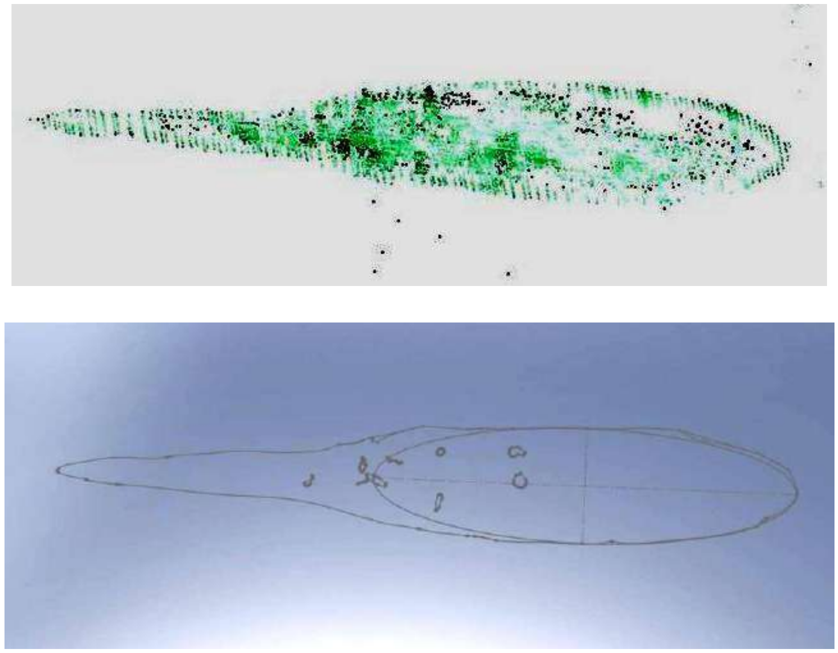

Figure 4. **(Top) View of scanned raw data after laser scanning. (Bottom) View of stain in AutoCad® program, with ellipse inserted.**

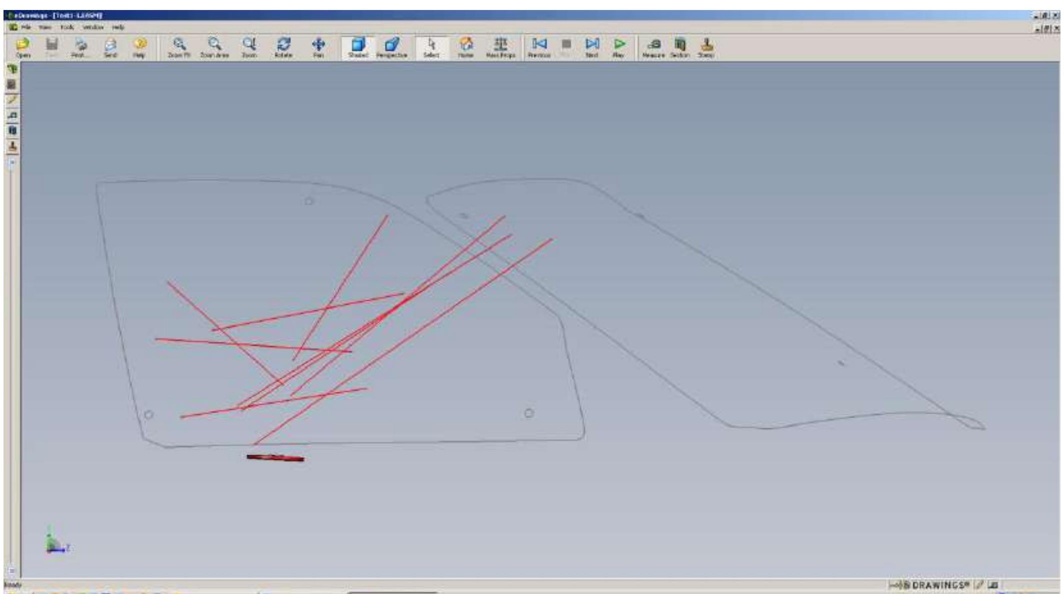

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Figure 5. **Lateral view of experiment 1.1.**

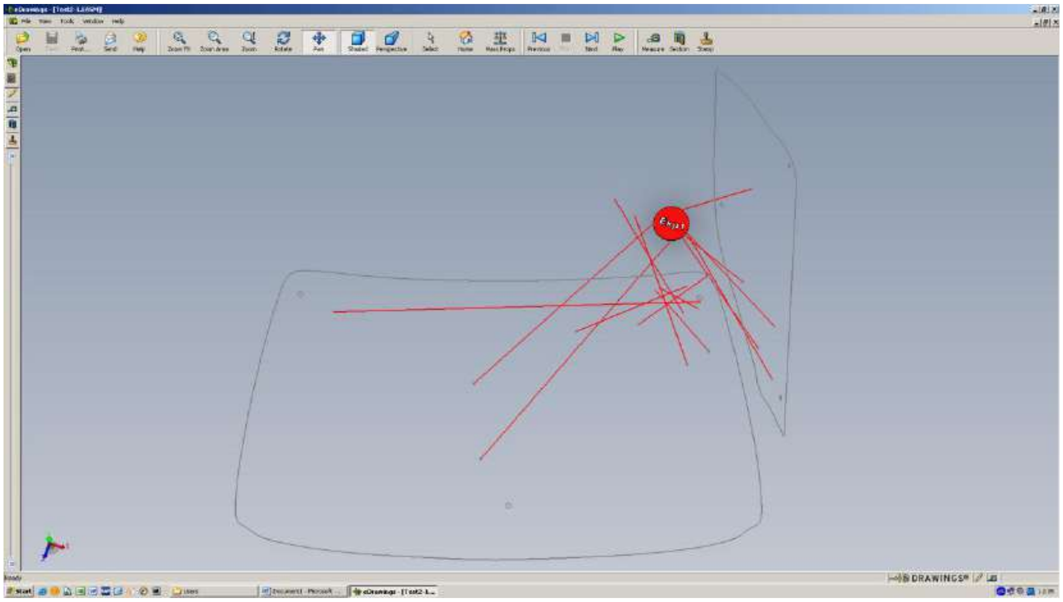

Figure 6. Top view of experiment 2.1.

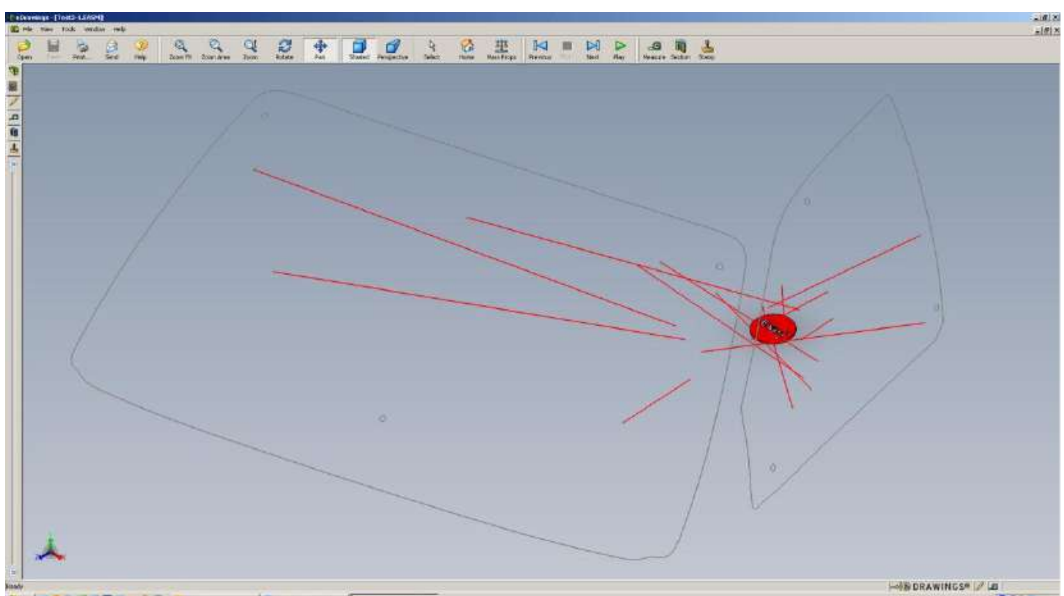

Figure 7. Isometric view of experiment 3.1.

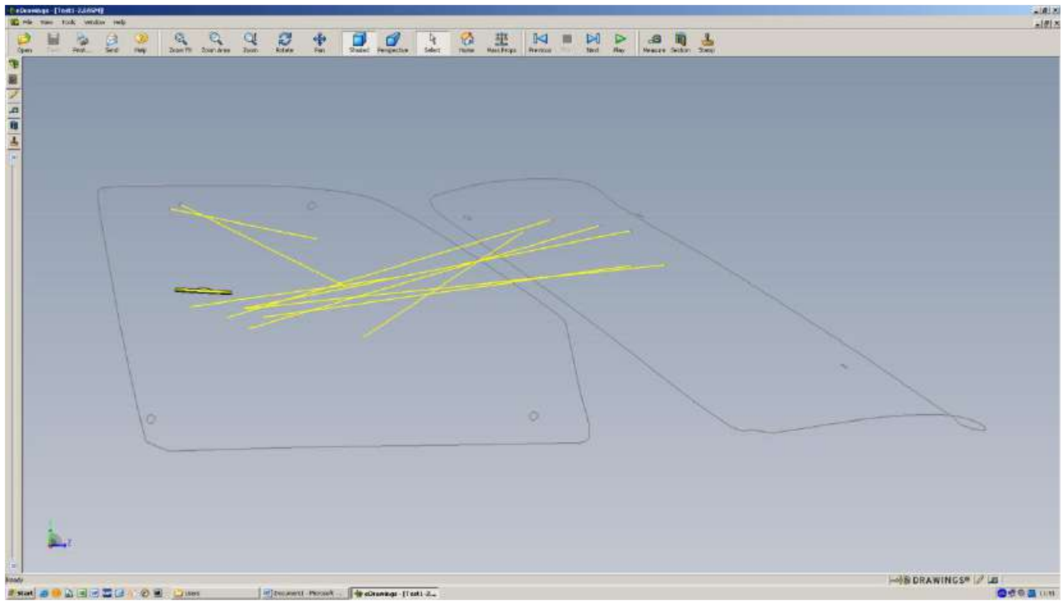

Figure 8. Lateral view of experiment 1.2.

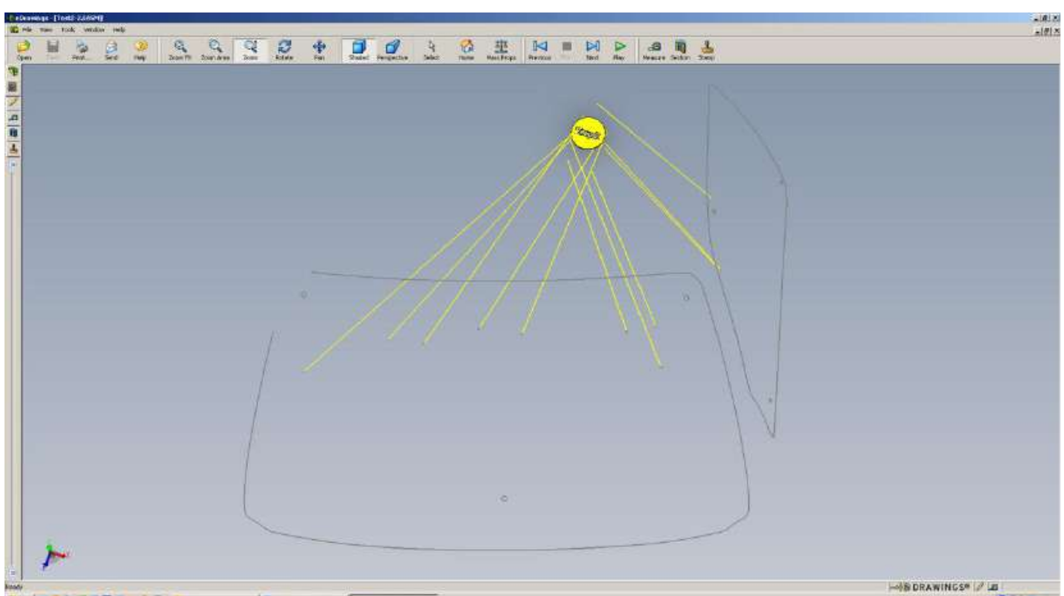

Figure 9. Top view of experiment 2.2.

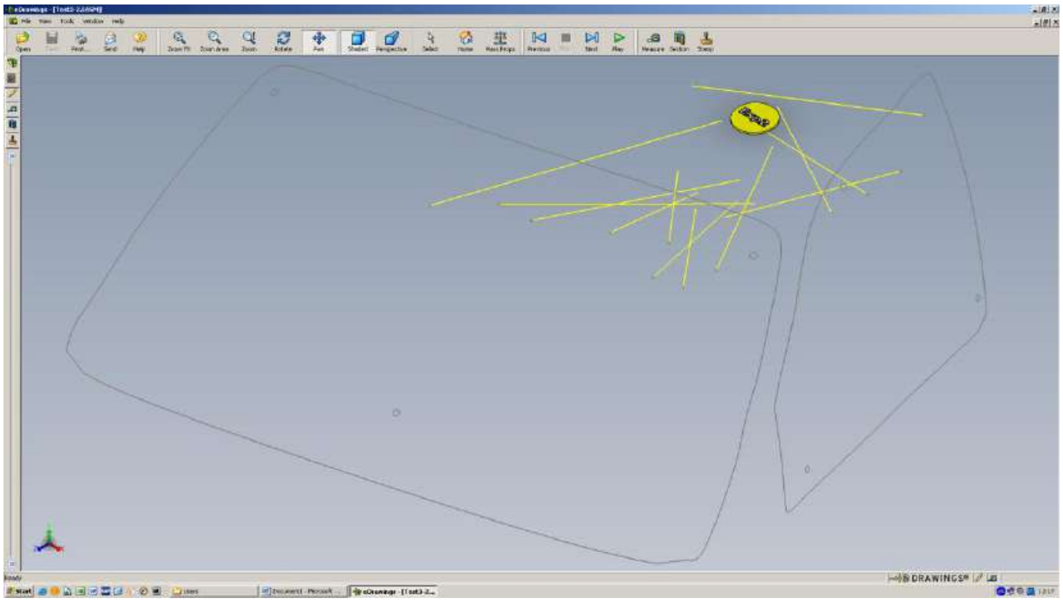

Figure 10. Isometric view of experiment 3.2.

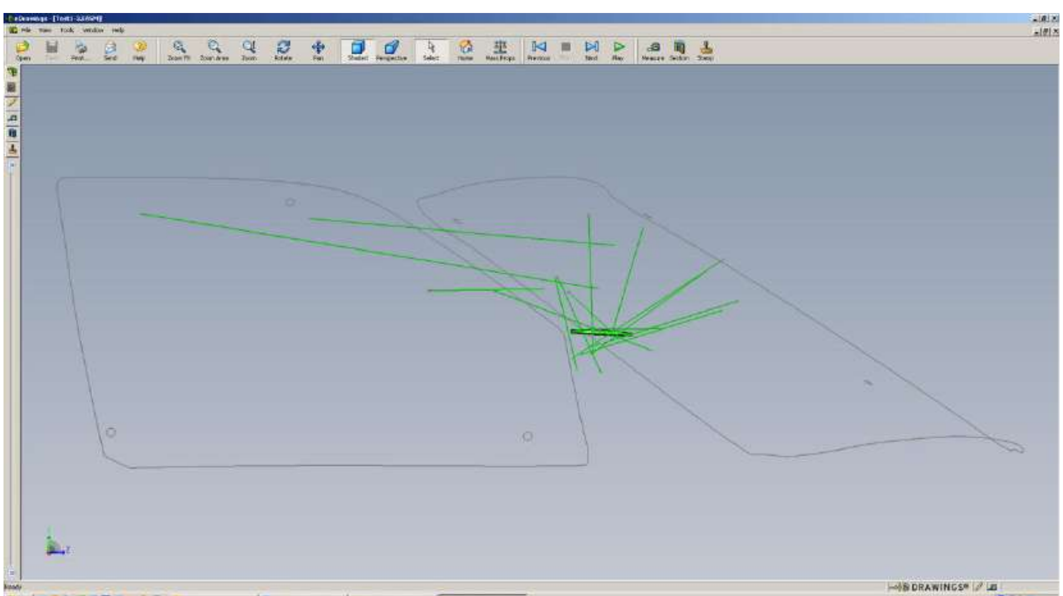

Figure 11. Lateral view of experiment 1.3.

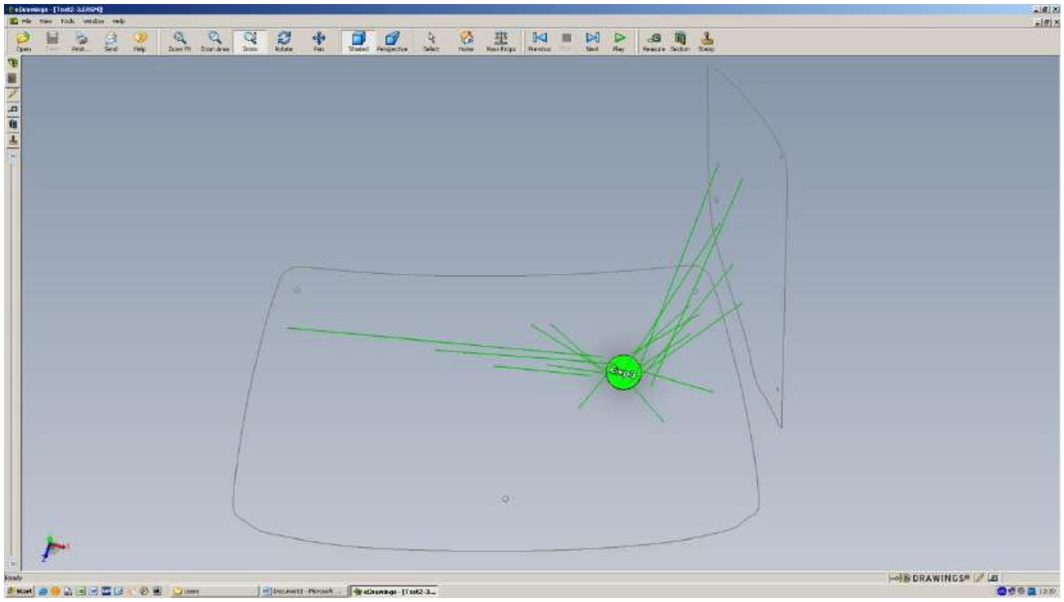

Figure 12. Top view of experiment 2.3.

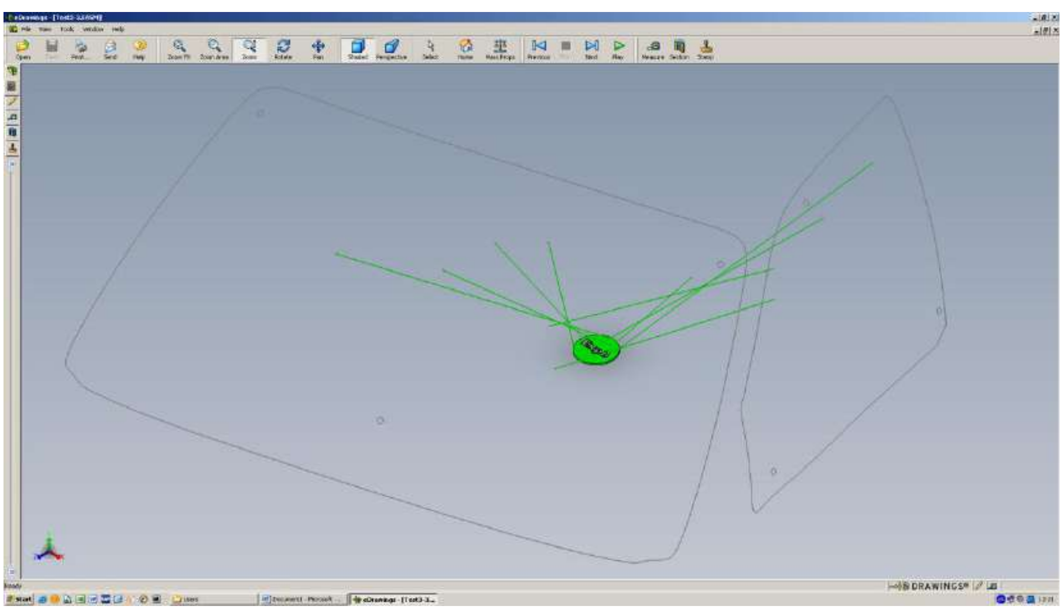

Figure 13. Isometric view of experiment 3.3.

The results in all nine experiments showed most of the area-of-origin lines to track back to a general area of the point of origin and showed a correlation between those lines and the origin. a correlation between those lines and the point of origin. A basis was formed to progress to scanning the windscreen, front and rear passenger's windows from the vehicle involved in the motor vehicle collision, and achieve an accurate result for an area-of-origin.

The same steel frames were used to hold the windscreen and the front and rear passenger's windows, this time in an upright position. A number of separate blood spatter patterns were identified on the windscreen and on the front and rear passenger's windows which were present in the vehicle at the collision. Numerous stains were scanned using the laser-scanning mechanism of the FARO Laser ScanArm®. Several reference marks were then point-scanned of the perimeter of the windscreen. This digital data was loaded into the AutoCad® program, where the area of-origin calculations were conducted on suitable stains and projected area-of-origin lines were inserted based on those calculations (Figures 14-16).

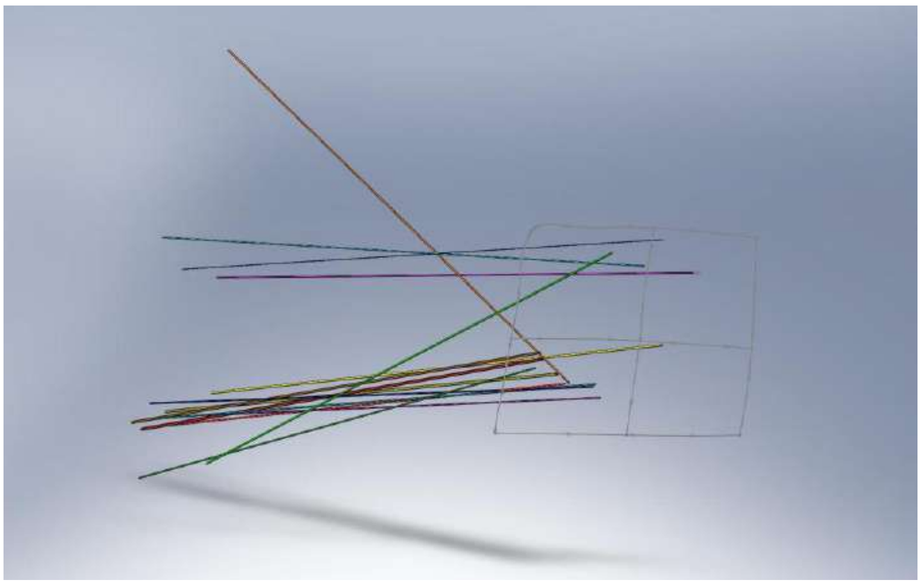

Figure 14. Side view of the rear passenger's window, showing area-of-origin lines.

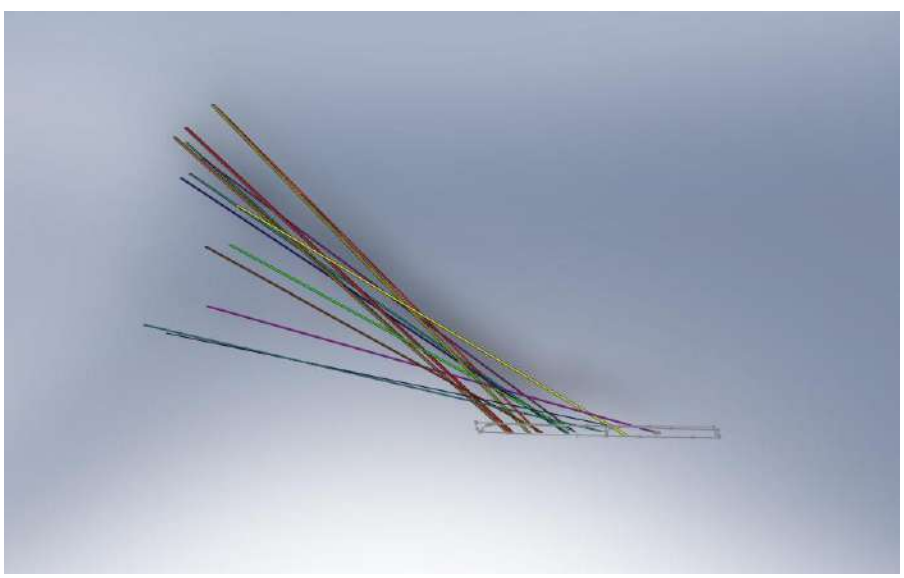

Figure 15. Plan view of the rear passenger's window, showing area- of-origin lines.

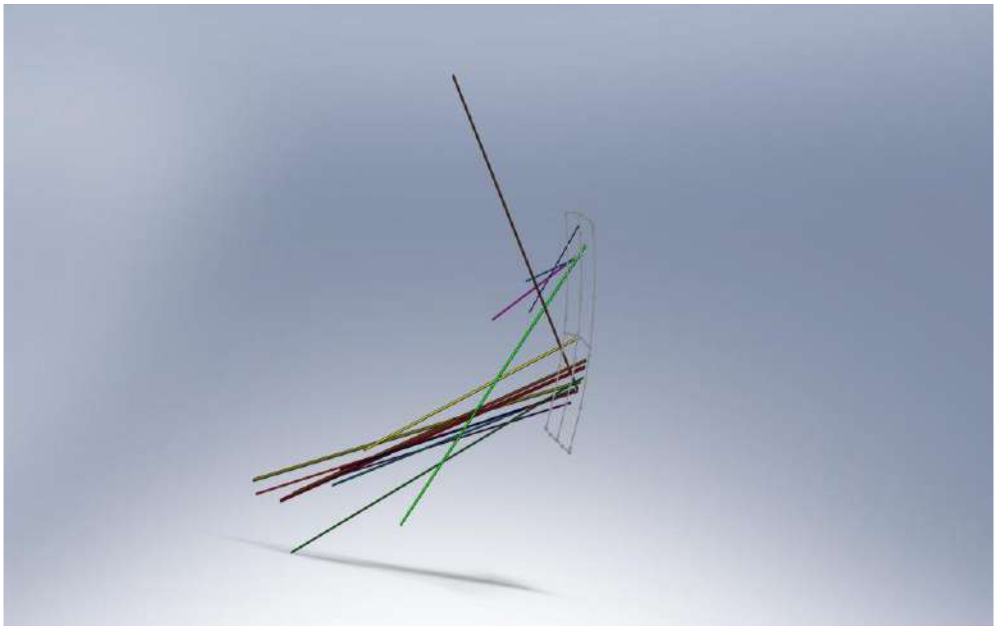

Figure 16. Front view of the rear passenger's window, showing area-of-origin lines.

A donor VS Holden Commodore sedan was sourced. This vehicle was placed on jacks to negate any movement due to the vehicle's suspension. The vehicle was externally point-scanned with a number of benchmarks (reference points). From these benchmarks, the FARO Laser ScanArm® could be placed in different locations around the vehicle and referenced. This allowed the entire vehicle to be scanned accurately. The perimeters of the windscreen, front passenger's window and rear passenger's window were also point-scanned.

The driver's and front passenger's compartment was then laser-scanned. This included the inner door trims, front seats, centre console, dash, and floor area. This data was loaded into the AutoCad® program, and a three-dimensional model of the vehicle was constructed, incorporating a rendered interior of the vehicle set inside a wireframe exterior of the vehicle.

The scanned data, complete with area-of-origin lines from the selected window blood spatters, was inserted into the corresponding window references of the rendered VS Commodore. The combination of the calculated blood spatters on the curved surfaces of the windscreen and passenger's side windows showed an area of origin to have originated from a position low in the passenger's seat (Figures 17-19. An interesting outcome of this combined image was that, when area-of-origin lines were calculated and combined with the rendered view of the vehicle, the blood spatters on the rear passenger's window fell between the vehicle's B pillar and front passenger's seat.

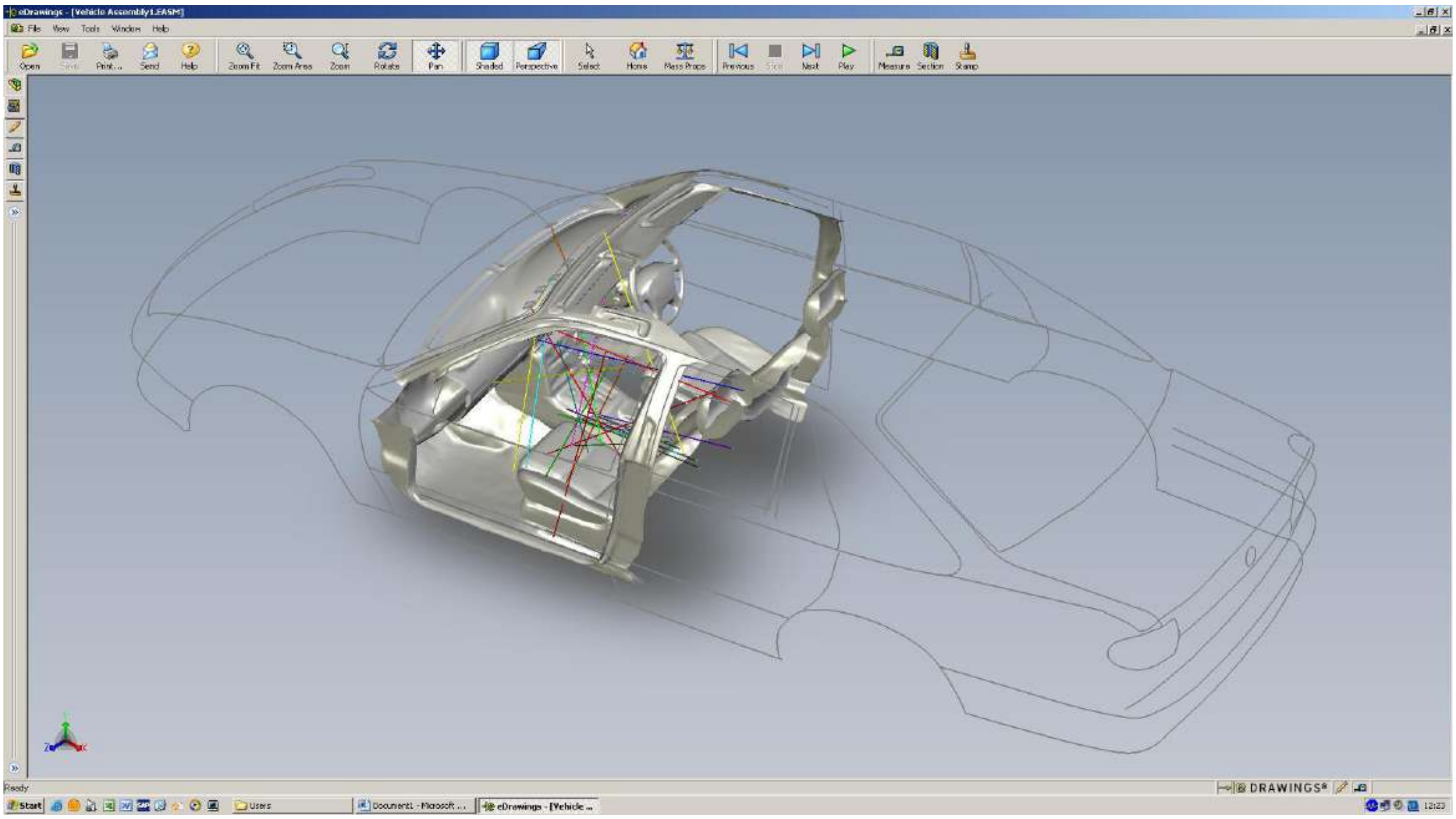

Figure 17. Rendered model of VS Holden Commodore sedan, as viewed in AutoCad®.

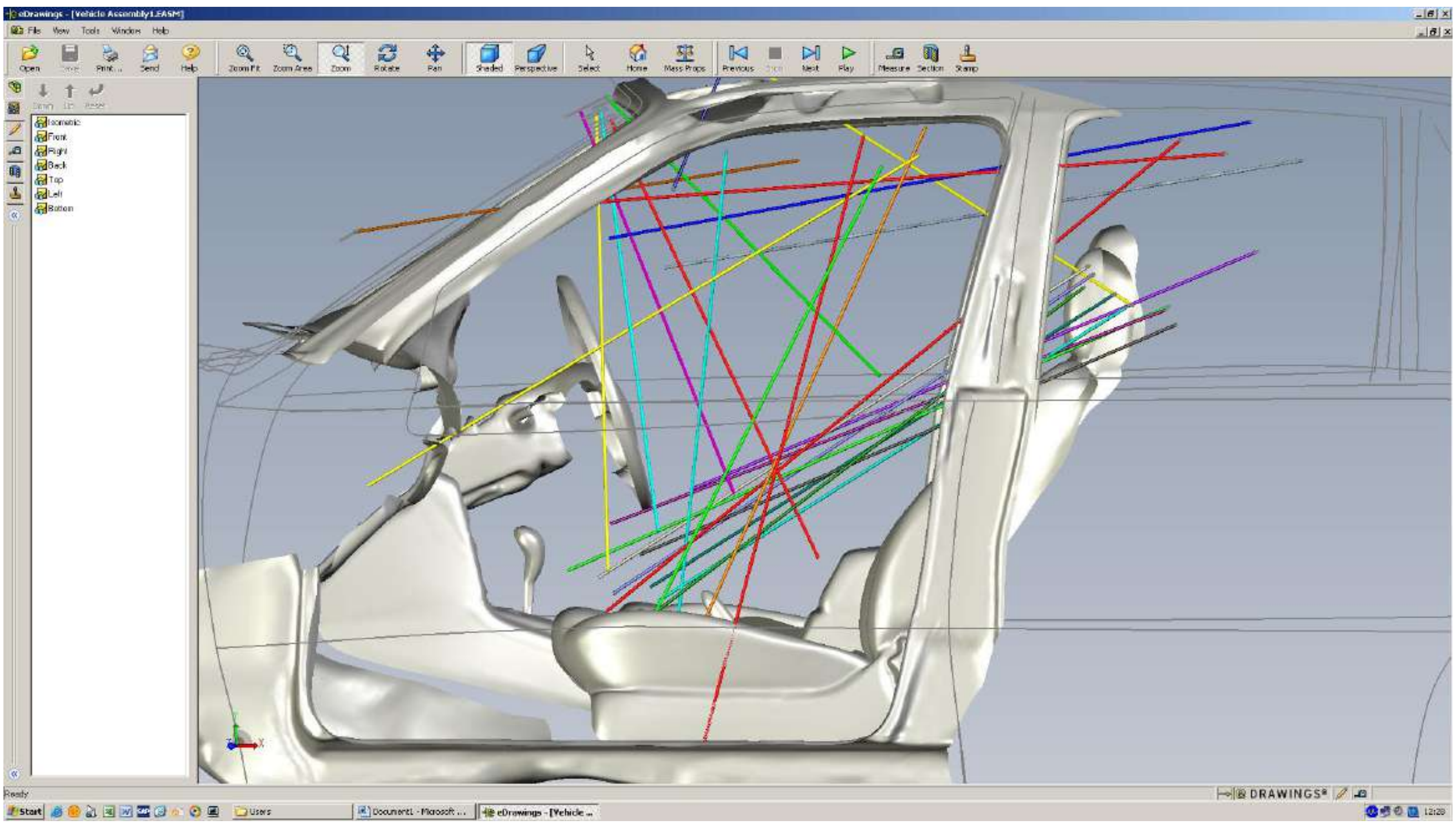

Figure 18. Side view of rendered model of vehicle, showing area-of-origin lines inside the vehicle.

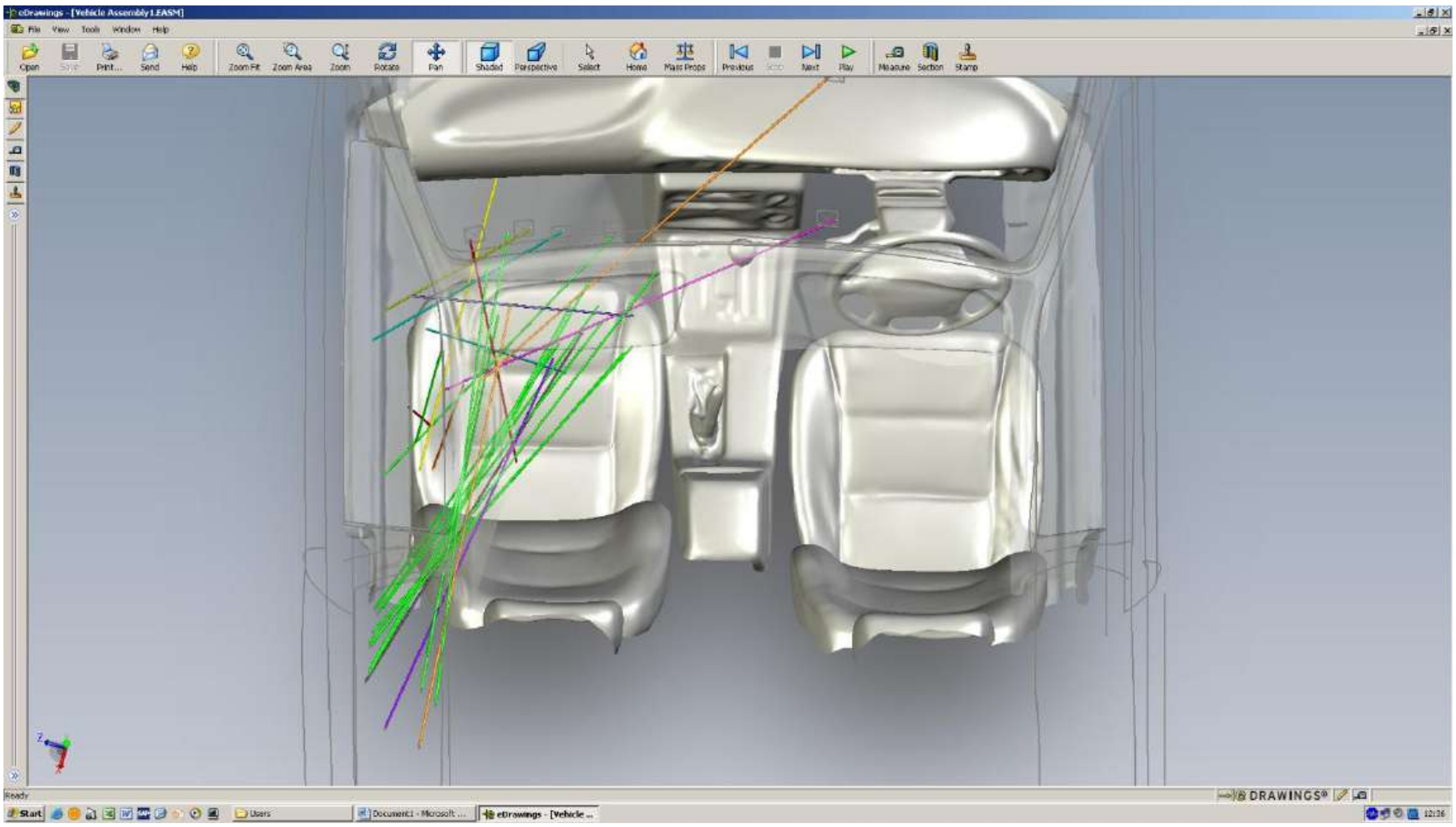

Figure 19. Plan view of the driver's and front passenger's compartment, showing area-of-origin lines projecting into the passenger's seat.

Results

The nine validation experiments showed most area-of origin lines to track back to and above the general area of the hockey puck origin. These experiments formed a basis for a stable working platform for area-of-origin calculations to be conducted on the spattered blood inside the windows of the VS commodore involved in the collision. Area-of-origin lines do not take into account the parabolic arc of the flight path of projected blood. A calculated area of origin is the upper limit of the actual height of the actual area of origin.

In experiments 1 through 9, the area of origin was positioned within 700 millimetres of the target surfaces. The oscillating mechanism of blood in flight, when leaving the area of origin, should have an adverse effect upon the accuracy of the resulting area-of-origin lines (when calculated from those particular stains), when the stain is within 700 millimetres. However, the results of these experiments show this effect to be negligible at best, and the outcome was not adversely affected.

The combination of the rendered three-dimensional model with the calculated stains on the windscreen and front and rear passenger's side windows, showed the lines to track back to an area low in the passenger's seat, just above the squab, when viewed in the Autocad® program. This negated the version given by the suspect (Mr. X) that the blood spattering inside the vehicle was a result of the deceased colliding with the windscreen in the motor vehicle collision.

Conclusion

Mr. X was charged with murder, kidnapping and inflicting grievous bodily harm, and was bail-refused. The matter proceeded to committal and was set down for trial. Immediately prior to the trial date, Mr. X entered a plea of guilty to manslaughter, kidnapping, and inflicting grievous bodily harm, admitting to assaulting the deceased inside the vehicle and prior to the collision, using a blunt object. Mr. X was sentenced to thirteen and a half years in jail.

Acknowledgements

The authors would like to thank Dr. Michael (Tony) Raymond, Senior Sergeants Callister and Van Leeuwen, Inspector Forbes, all from New South Wales Police Force, for their support and guidance.

References

1. James, S.H, Kish, P.E, and Sutton, T.P. Principles of Bloodstain Pattern Analysis, CRC Press, 2005, p.219-225

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Computer Analysis of Bloodstain Patterns on Angled Surfaces[1]

Lindsay Nowack[2,3], Rachel Collins[4], Grace Li[4,5] , A.L. Carter[6], Mike Illes[7], Victor Gorman[8], Serge Larocque[8], Theresa Stotesbury[2,9], and Brian Yamashita[10]

Abstract

Manual stringing of bloodstain patterns at a crime scene will indicate to the investigator an approximate location for the source of the blood. This procedure can be tedious and time-consuming, and may produce imprecise results. Computer programs have been developed which can compute the trajectories that would have been indicated by the strings, calculate the area of origin and display the virtual flight paths of the blood drops on-screen. Until now, the BackTrack™ programs could be used only for surfaces which were parallel to the three coordinate axes. In the present series of experiments, a new program capable of analyzing angled surfaces has been developed and validated.

Introduction

Bloodstain pattern analysis at a crime scene can be used to determine things such as how many blows were struck, whether the victim was standing or sitting, or whether the victim came in contact with the floor, the wall, or a piece of furniture [1,2]. This type of evidence can be useful in corroborating or refuting the testimony of a suspect or a witness, or can be useful in assisting the police in determining in which direction an investigation should proceed.

For impact pattern stains, bloodstain pattern analysis relies on physics and trigonometry to determine the original location of the source of the blood spattered at a crime scene [3]. In the past, the conventional method of locating the area of origin for a bloodstain pattern consisted of running strings from the individual stains back into the room at the calculated angles at which the blood droplets had struck the surface. The approximate area of intersection of the strings indicated the location of the blood source [4]. This technique works well, but can be awkward and time-consuming.

More recently, bloodstain pattern analysts have had access to computer programs that would back-calculate the trajectory of blood to find the area of origin. The program BackTrack™ is able to incorporate into its calculations bloodstains from all four walls, the ceiling, the floor, and one offset surface parallel to each of these six surfaces. The program is easy to use and accurate [5,6], and is being used by various police agencies in Canada, the United States, and Europe [7].

BackTrack™ is able to combine data from a total of twelve surfaces in a crime scene. However, all of these surfaces are parallel to the three Cartesian planes. In a real-life scenario, angled surfaces are often encountered, for example, an angled ceiling in the upper floor of a house. In this project, blood was spattered on a combination of flat and angled walls. The bloodstain patterns were sometimes first analysed using the stringing method, and then the data were entered into a modified BackTrack™ program in order to determine if this new program could also handle angled surfaces.

Theory

The conventional BackTrack™ programs use Directional Analysis [2,3] to determine virtual string directions for each chosen bloodstain on a surface. The computer program displays top, end, and side views of the scene that illustrate to the investigator the straight paths of the blood droplets. The top view shows where the paths cross, and the program calculates an average value for the convergence point in the X-Y plane. The side view then gives an upper limit to the Z-value for the location of the height of the convergence point. This commercially-available version of the program is able to incorporate data from a total of twelve surfaces, with the condition that they all must be parallel to the three Cartesian coordinate axes.

In order to take into account a surface that is not perpendicular or parallel to one of the axes, the program was first re-written in order to take into account one angled surface. To take into account the rotation of a part of the wall about an axis part-way up the wall (rotation about a Y-axis to correspond to a sloped ceiling) [8] or an angled wall (rotation about a Z-axis) [9], the flight path, once calculated, has to be rotated in the correct direction and by the correct amount in order to re-direct the strings to the correct convergence point. For example, for rotation about a Y-axis, corresponding to a sloped ceiling, the corrected X-value, X_s, can be determined from the angle of rotation, Y_{rot}, through equations of the form

$$X_s = X_0 + \sin(Y_{rot}) Z_s$$

where X_0 is the value of X where the wall begins to slope, and Z_s is the distance in the Z-direction measured from the point where the wall begins to slope. Similarly, for a rotation around a Z-axis, the corrected location in the X-direction will depend on the sine of the angle, Z_{rot}. For a surface that is rotated around both the Z- and Y-axes, the correction of the X-value depends on $\sin(Z_{rot})$, $\cos(Z_{rot})$, and $\sin(Y_{rot})$ [10]. Figures 1a and 1b illustrate the final orientation of a surface after two rotations.

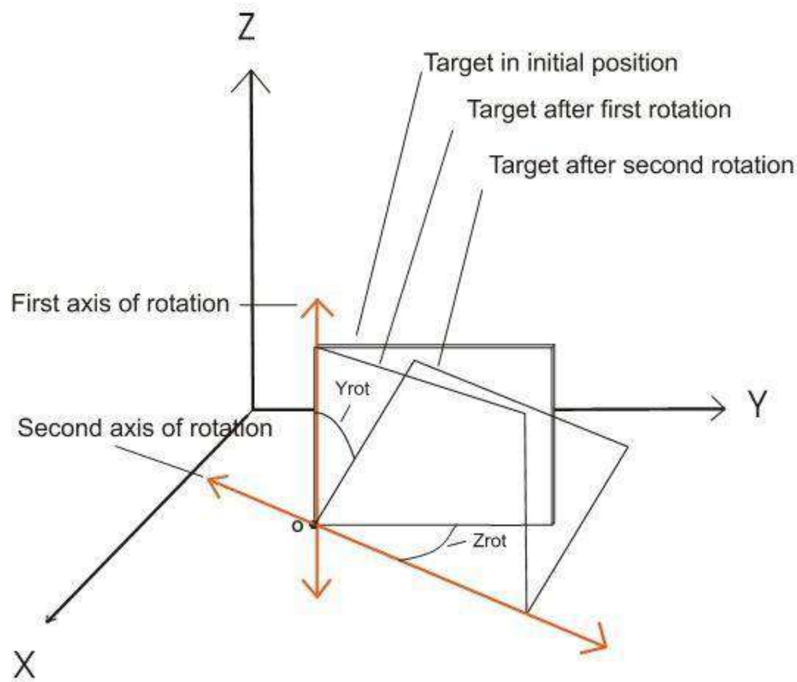

Figure 1a. A surface parallel to the Y-Z plane is first rotated around a Z-axis, and then around a Y-axis.

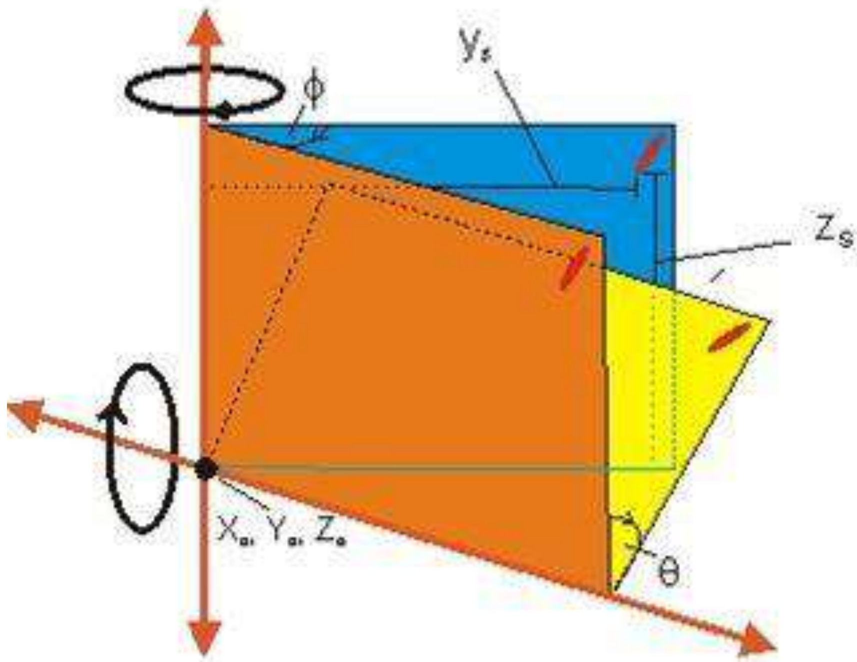

Figure 1b. Using colours for illustration, the initial position is a blue surface, rotated once to the orange position, and rotated a second time to the final yellow position.

Materials and Methods

For the first two sets of experiments, bloodstain targets were created on 1.2 m X 2.4 m (4 ft. X 8 ft.) pieces of white cardboard stapled to the walls in the laboratory. In the first series of experiments, in order to simulate an angled ceiling, a bend was made part-way up the cardboard, and the top part of the board was held in place at an angle by fastening a string through the top of the board to the ceiling (See Figure 2). The angle was measured with a large protractor. A second perpendicular wall was also created using another sheet of white cardboard. Approximately 10 mL of sheep's blood was placed on top of a hard rubber hockey puck at a known (X, Y, Z) location in front of the main wall. The blood was struck with a hammer, creating an impact pattern on the white cardboard, on three different surfaces (front wall, side wall, angled ceiling).

On each surface, approximately 10 stains were chosen for analysis. The X-, Y-, and Z-coordinates of each stain were measured, and each stain was photographed with a digital camera (Sony Mavica MVC_FD91) with a millimetre scale and plumb line. The images were analyzed using the BackTrack/Images™ program (Forensic Computing of Ottawa) and the BackTrack/Win™ program. The data from the perpendicular surfaces were analyzed first, then the data from the angled ceiling were analyzed, and finally, all of the data were analyzed together. The patterns were also analyzed using the manual stringing method.

Figure 2. Target set-up for sloped ceiling (Rotation about a Y-axis).

In the second set of experiments, a bloodstain room with moveable walls was used in order to create a situation in which the side walls remained perpendicular to the floor, but at an angle to the front wall (See Figure 3). As before, bloodstains were created by hitting approximately 10 mL of blood on a hockey puck with a hammer.

A total of approximately 32 stains were chosen for analysis from each pattern used in this series of experiments. The X-, Y-, and Z-coordinates were measured for each stain, and each stain was photographed with a scale and a plumb line using a digital camera (Nikon CoolPix 4500) equipped with a macro cool-light (Model SL-1). For two of the four rooms set up for this part of the experiment, manual stringing was carried out prior to using the computer program. As in the previous case, data was initially processed using BackTrack/Images™, and then transferred into BackTrack/Win™.

In a third set of experiments, a plywood square of approximately 40 cm X 40 cm, covered in foam core, was rotated in two directions and placed in front of the main wall, in the flight paths of the blood drops created by the impact (See Figure 4). Again, the X-, Y-, and Z-coordinates of each stain were measured, and each stain was photographed with a digital camera (Nikon D80) with a millimetre scale and plumb line. The measurements of the stains on the doubly-rotated surface, along with the measured angles of rotation around the Y- and Z-axes, were then used in the modified BackTrack program to calculate the area of origin for the blood source.

Figure 3. Target setup for angled walls (Rotation about a Z-axis).

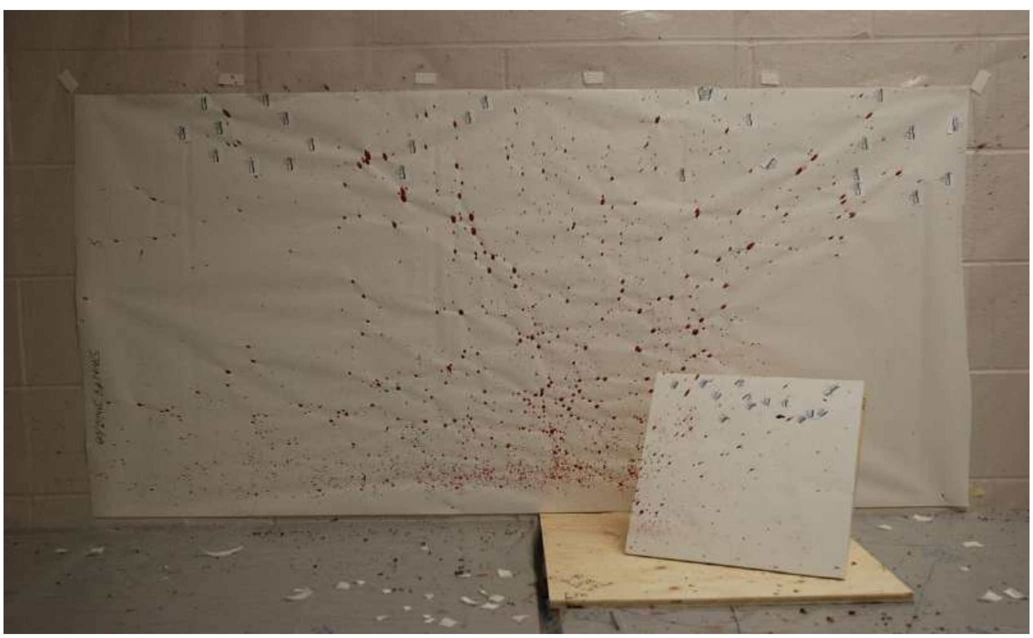

Figure 4. Experimental set-up that includes an additional target rotated in two directions.

Results

Table 1 lists the (X, Y, Z) data calculated from the measurements of the bloodstains produced using the sloped ceiling type of target set-up illustrated in Figure 2. Values generated using stains on the perpendicular vertical surfaces compare well with the results generated using the stains on the sloped ceiling. Figures 5 and 6 show the Top View and Side View, respectively, of a sloped ceiling experiment, showing only the virtual flight paths of the drops hitting the ceiling. Figure 6, with the virtual strings originating on the perpendicular walls turned off, illustrates very well the virtual flight paths of the blood drops hitting the sloped ceiling.

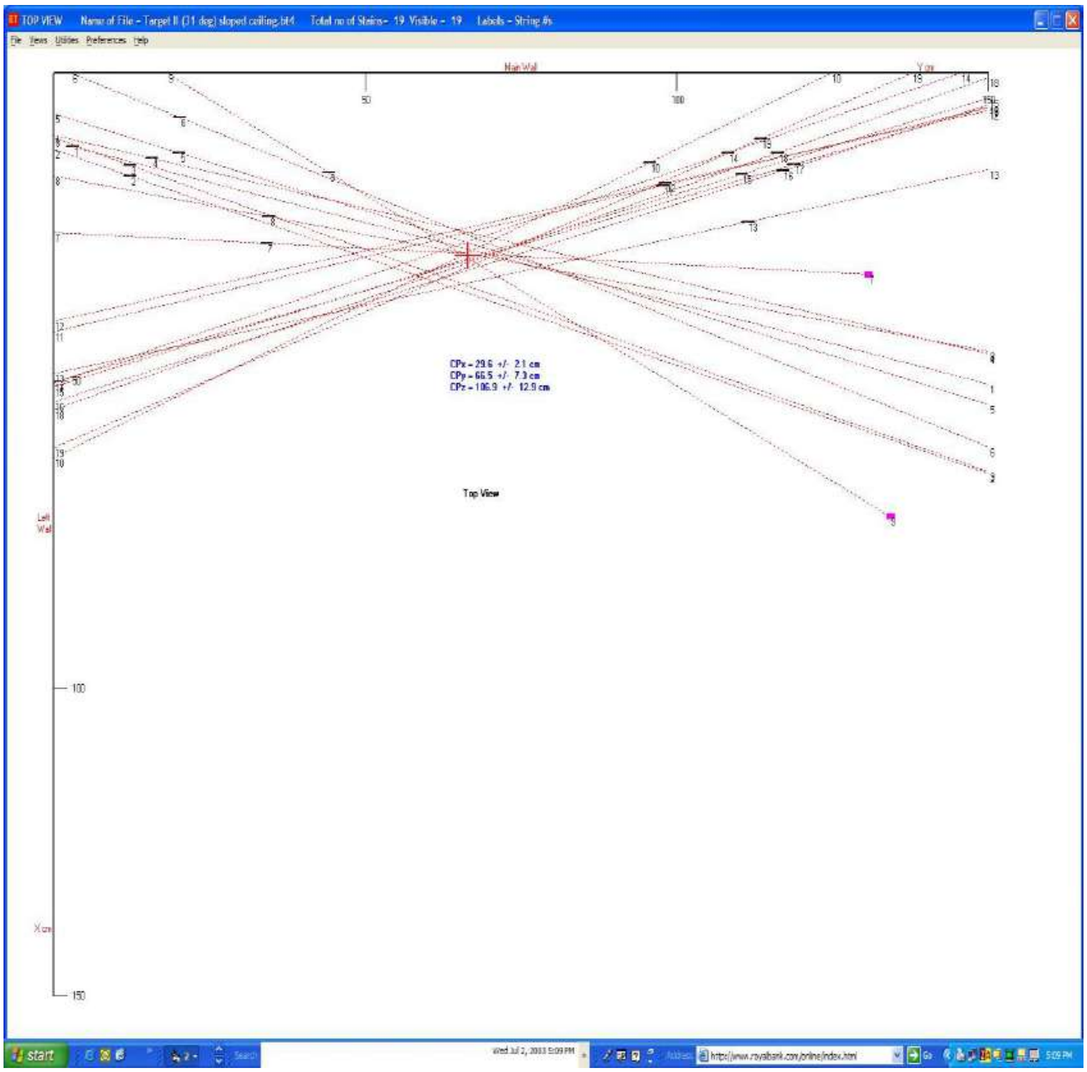

Figure 5. BackTrack™ Top View showing virtual flight paths for drops striking the sloped ceiling.

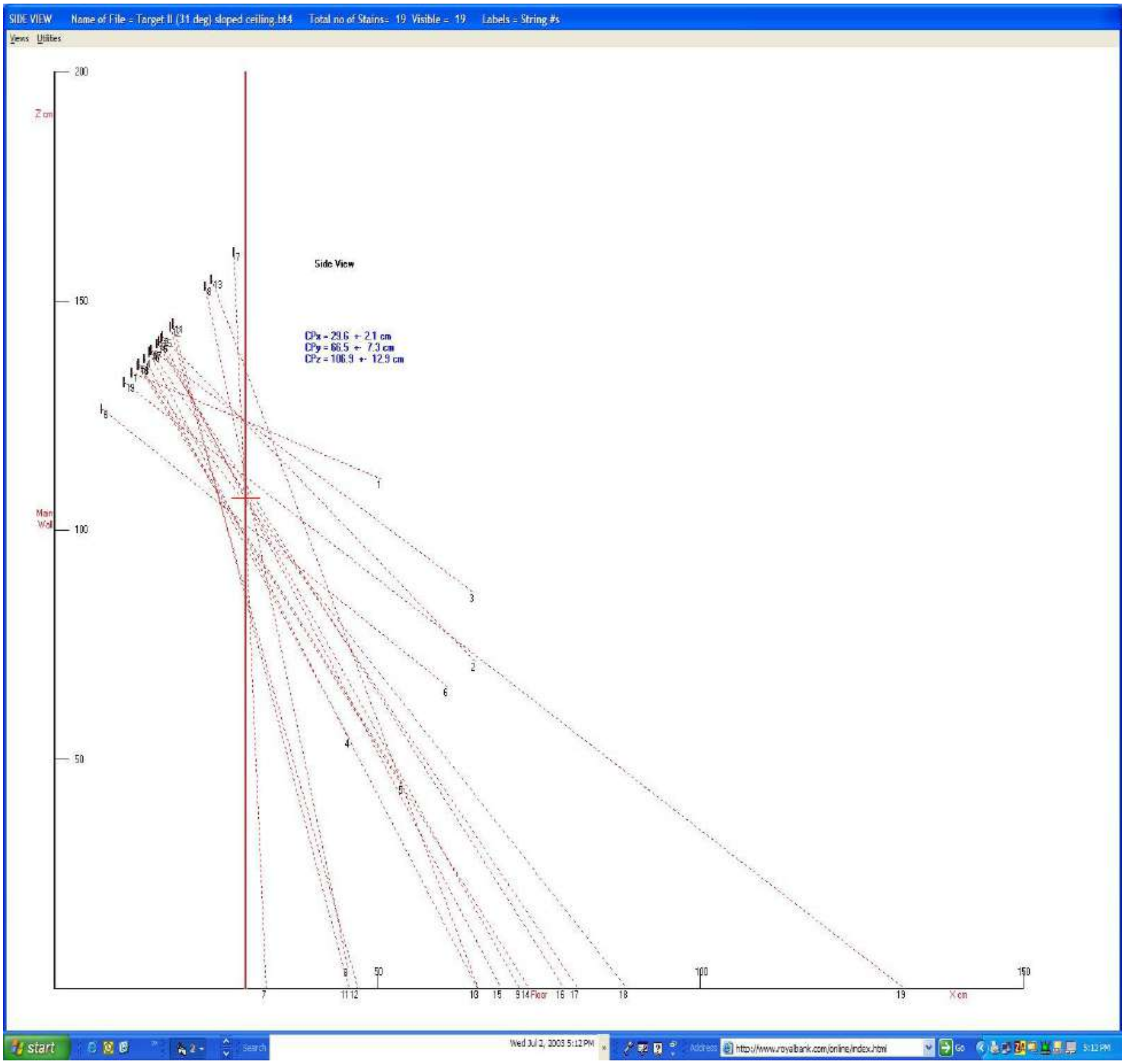

Figure 6. BackTrack™ Side View showing virtual flight paths for drops striking the sloped ceiling. Note that the ends of the virtual strings correspond to the sloped ceiling.

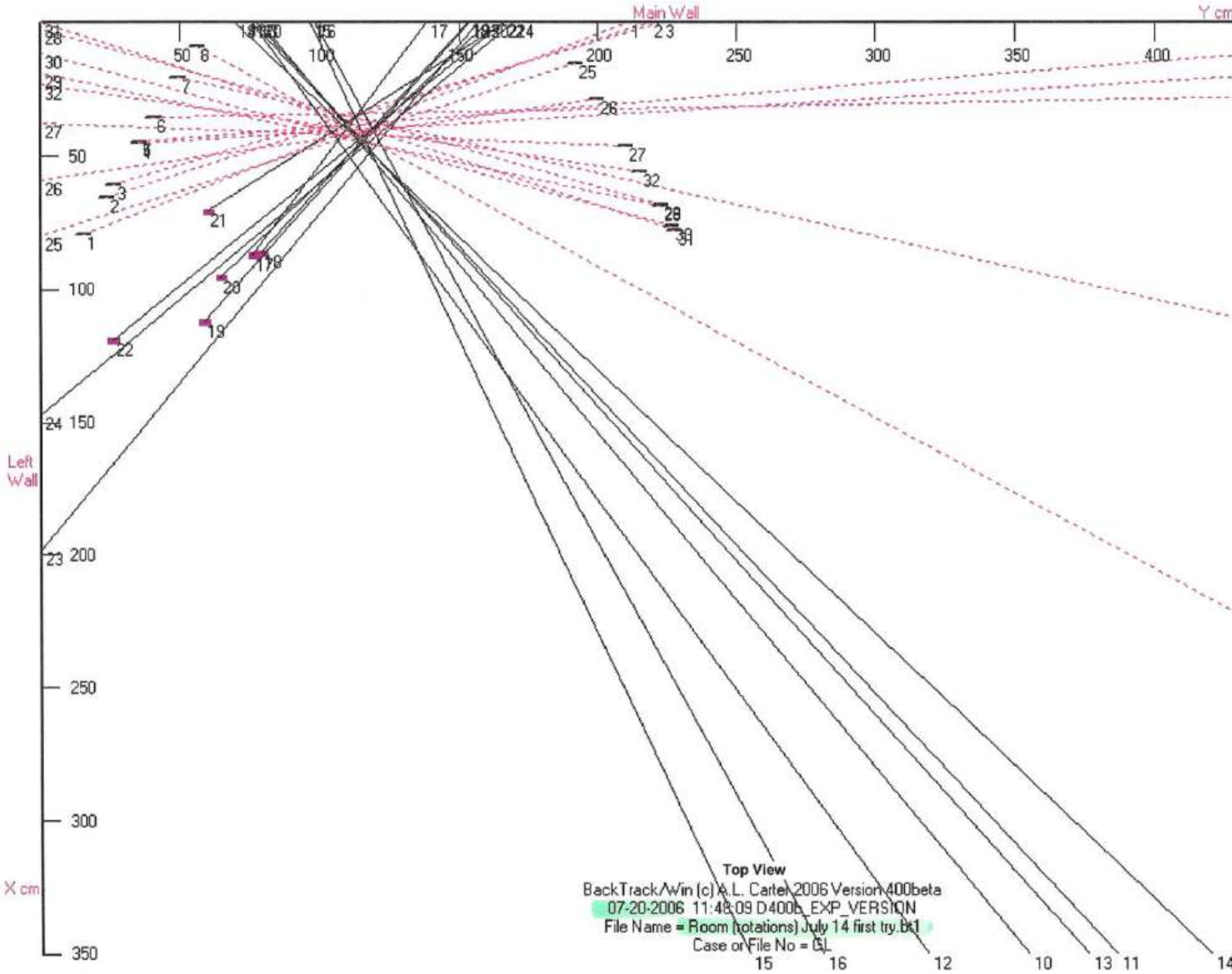

Figure 7. BackTrack™ Top View showing flight paths of drops for the case of angled walls. Black lines show the drops striking the front wall. Red lines show the drops striking the angled walls.

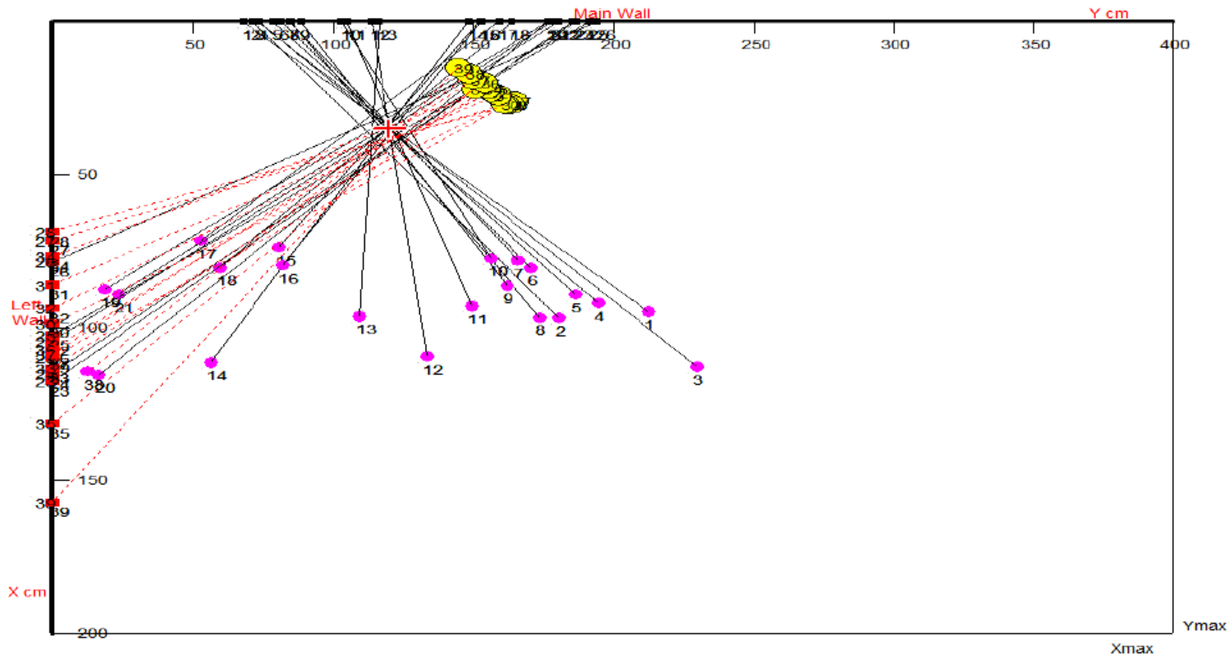

Figure 8. BackTrack™ Top View showing the flight paths of drops of blood for the case where a doubly-rotated second surface has been added. The black lines correspond to drops striking the front wall. The red lines illustrate the flight paths of drops of blood striking the rotated surface.

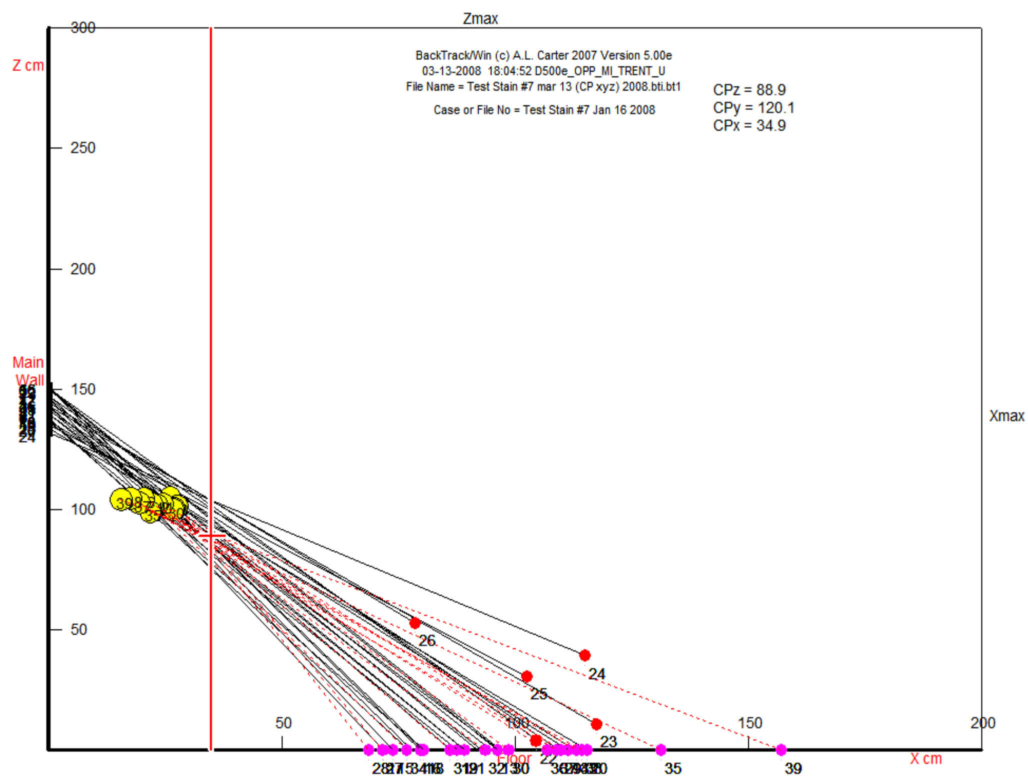

Figure 9. BackTrack™ Side View showing the flight paths of drops of blood for the case described in Figure 7. Again, black lines show the flight paths for the drops of blood striking the front wall, and the red lines show the flight paths for drops striking the rotated surface.

Table 1. Angled ceiling (Rotation around a Y-axis) Angle = 31 degrees. X-, Y-, and Z-values calculated using stains on vertical surfaces alone; and using the angled surface.

	Known value/cm	Vertical surfaces/cm	Angled surfaces/cm
X	30	28.7 ± 3.1	29.6 ± 2.1
Y	64	66.0 ± 3.8	66.5 ± 7.3
Z	87	90.0 ± 3.7	106.9 ± 12.9

Table 2. Angled walls (Rotation around a Z-axis) Angle = 45 degrees. X-, Y-, and Z-values calculated using the stringing method; stains on the perpendicular main wall only; and stains on all walls.

	Known value/cm	Strings/cm	Main wall/cm	All walls/cm
X	35	15 – 35	33.4 ± 4.0	35.5 ± 6.0
Y	146.8	126 – 151	143.1 ± 2.7	141.3 ± 3.9
Z	89	95 - 130	94.5 ± 7.6	91.6 ± 6.9

Table 3. Angled walls (Rotation around a Z-axis) Angle = 60 degrees. X-, Y-, and Z-values calculated using stains on the perpendicular main wall only; and stains on all walls.

	Known value/cm	Main wall/cm	All walls/cm
X	43.5	44.1 ± 3.7	40.7 ± 3.9
Y	116.5	115.1 ± 3.7	114.4 ± 4.8
Z	69	74.2 ± 12.5	80.2 ± 13.9

Table 4. Results for rotation about two axes (Y-axis and Z-axis). X-, Y-, and Z-values calculated using stains on all surfaces.

Known value/cm	Calculated/cm		Known value/cm	Calculated/cm
34	34.9	X	20	20.4
120	120.1	Y	125	123
80	88.8	Z	83	93.2
37	33	X	22	21.6
130	134	Y	112	112
86.5	94.3	Z	87	99

Tables 2 and 3 show the data for two different experiments using angled walls (See Figure 3). Table 2 shows results using the main wall only, as well as results using the main wall and the two angled walls. Results using the stringing method are listed in Table 2, but stringing was not done for the experiment documented in Table 3. Figure 7 shows the Top View of one of these experiments. The black flight paths correspond to drops striking the front wall, while the red lines show the flight paths of drops hitting the angled walls.

Table 4 lists data for four different experiments where an extra surface which had undergone two rotations was added (See Figure 3). Figures 8 and 9 show the Top View and Side View, respectively, for one of these experiments. The black lines show the flight paths for drops hitting the front wall, while the red lines show the flight paths for drops hitting the doubly-rotated surface.

Discussion

The results shown in Tables 1-4 indicate that the modified version of BackTrack™ can be used to successfully analyze bloodstain patterns when one surface has undergone one or two rotations about the Y- and/or Z-axes. As is usually the case with BackTrack™, the determination of the Z-value shows the largest discrepancy with the known values.

HemoSpat, another computer program that utilizes the same Directional Analysis theory, can also analyze a bloodstain pattern where one surface has undergone a rotation about a Cartesian axis [11]. However, it's not known exactly how this program calculates the new blood drop trajectories. Unfortunately, the modified version of BackTrack™ used to do these analyses is not yet commercially available, but may be added to a future release of the program.

Acknowledgements

We would like to acknowledge Richard Eiklenboom, Bruce MacLean, Jon Forsythe-Erman, and the late Dan Rahn for many helpful discussions regarding this project. We are grateful to the Canadian Police College for providing the location for creating some of the bloodstain targets. Further, we are grateful for the support from the Trent University Forensic Science Program and the International Association of Bloodstain Pattern Analysts (IABPA), specifically the Daniel Rahn Memorial Grant.

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1. Portions of this work were presented at the Joint Meeting of the Canadian Identification Society (CIS) and the International Association for Identification (IAI), Ottawa, ON, July 2003; at the International Association of Bloodstain Pattern Analysts (IABPA) Conference, Tucson, AZ, October 2004; at the IABPA Conference, Corning, NY, October 2006; and at the IABPA Conference, Boulder, CO, October 2008. Parts of this work were supported by the Daniel Rahn Memorial Grant from the IABPA.
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A Simple and Quick Method of Making Sketches Using Adobe Photoshop®

Michael E. Gorn

Abstract

This article will describe how Adobe Photoshop® can quickly and easily be used to produce a sketch from any digital image. This can be useful during the laboratory examination of items or the processing of crime scenes.

Introduction

The production of sketches is a crucial step in the proper documentation of evidence, both in the laboratory and at crime scenes. Normally a rough sketch is made first followed by a smooth sketch if needed. The rough sketch does not need to be perfect and is produced either during the processing of a scene or during the bench examination of an item. At a scene, its purpose includes the documentation of objects in relation to each other, recording of measurements and positioning of evidence. In the lab, a sketch is produced denoting any evidence which may be present on that item (i.e. trace materials, blood staining). A smooth sketch is a more polished scale diagram, often produced for court (1).

Normally, the rough sketch is simply drawn free-hand on paper with a pen and ruler. Plastic templates can be purchased to assist in making rough sketches. These templates contain commonly found items (i.e. weapons, furniture) which can be traced onto a sketch. In the lab, hand drawn templates of items such as clothing can be used but may not reflect the true appearance of the item being examined. However, the use of portable computer technology (laptop, printer and appropriate software) can greatly assist in producing quality sketches.

Materials

1. Laptop computer and portable printer (If for use at crime scenes)
2. Adobe Photoshop® (method is compatible with all versions of Photoshop® including Adobe Elements®)

Method

The process of converting an image to a sketch is as follows:

1. Open the desired image in Photoshop®/Elements®
2. Make a duplicate image of the original before conducting any further processing
3. Using the menu bar, select *image□ mode□ grayscale*
4. Using the menu bar, select *filter□ stylize□ find edges*

The duplicate image will now be reproduced in sketch format. If needed, the brightness and/or contrast can be used to develop more detail within the sketch.

Figure1. Color crime scene image showing the location of footwear marks.

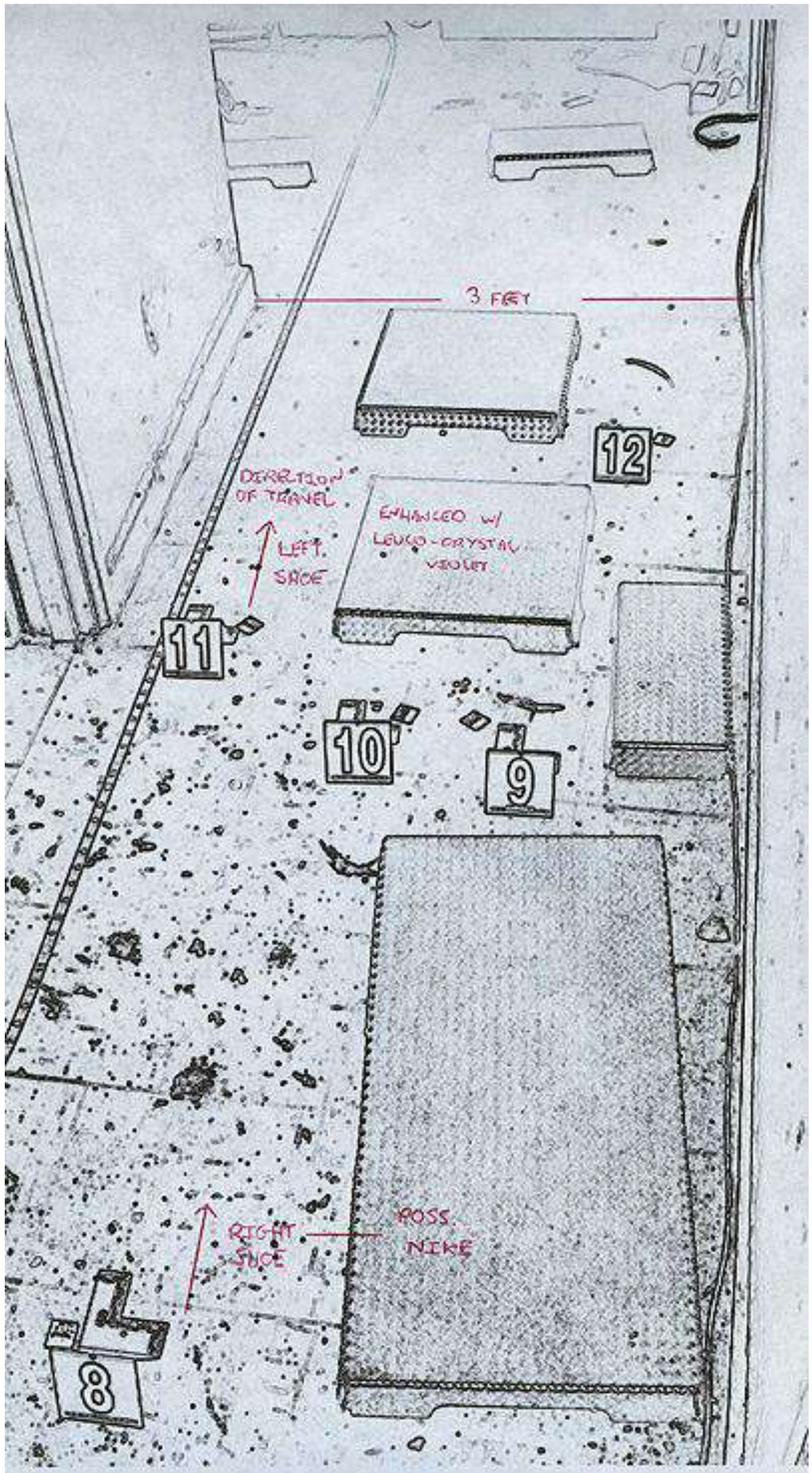

Figure 2. Sketch of figure 1 with hand notes and measurements.

Figure 3. Color image of a mock crime scene (image reproduced courtesy of LGC Forensics).

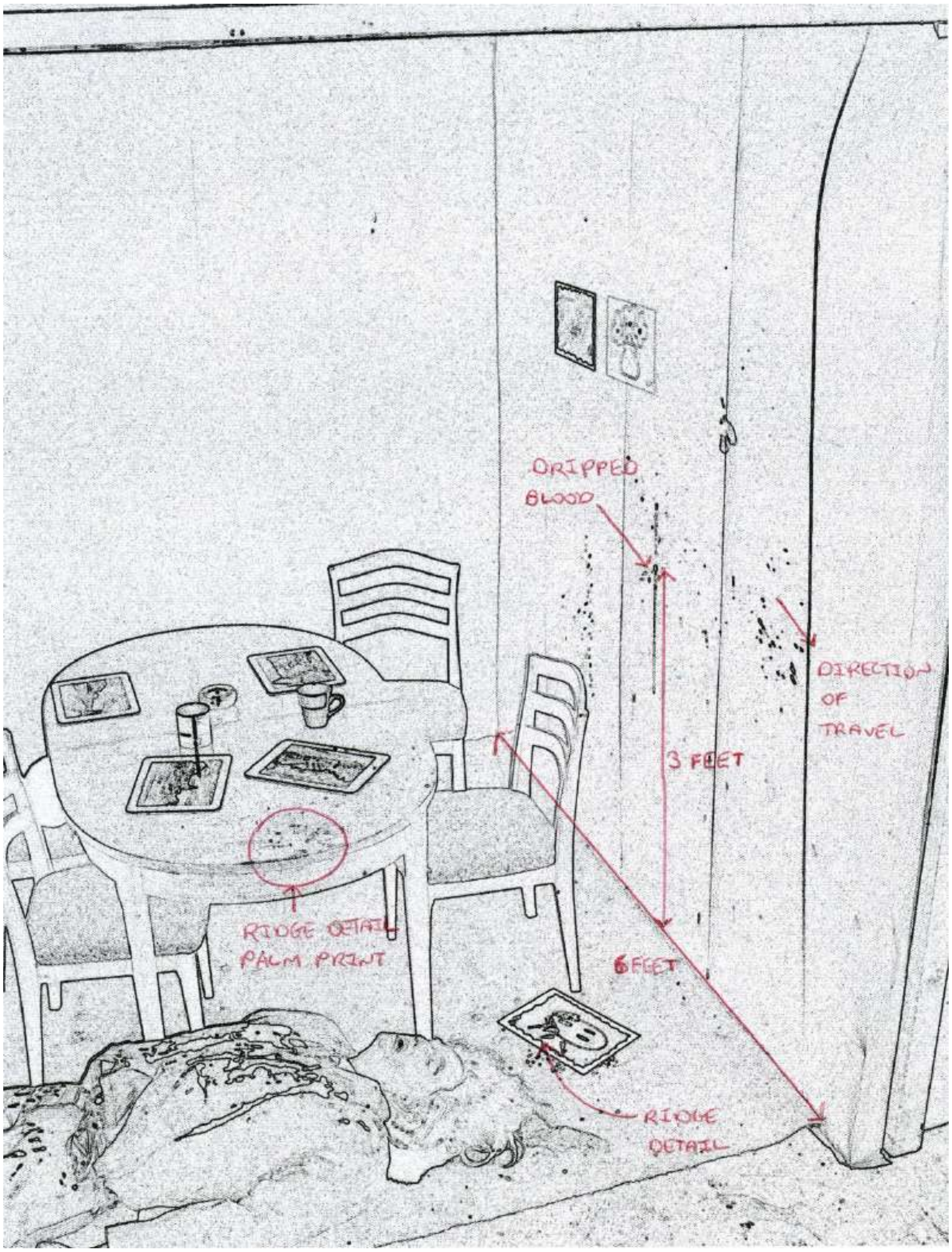

Figure 4. Sketch of figure 3 with hand notes and measurements.

Discussion

Figures 1 and 3 are regular color images of a real and a mock crime scene. Figures 2 and 4 are the sketch versions of Figures 1 and 3 respectively. As illustrated, the sketches are shown in 3-D format with appropriate information labeled such as measurements, descriptions of patterns and general scene notes. Considering it may be difficult to accurately record 3-D information, such as bloodstain patterns on adjacent walls in an indoor environment, this technique would provide the scene analyst with another tool with which to document the evidence. This technique can also be used to create an accurate sketch from any items being examined in the laboratory as opposed to drawing free-hand diagrams which rely on the skill of the lab analyst and may not be a true reflection of the item being examined.

As long as proper history logs are maintained which document any changes to an image, there should be no issues in court. The author has used this technique in numerous cases, both in the lab and at scenes, without any objections from attorneys when presenting the evidence in court.

Conclusion

The use of Photoshop® software and computer technology, such as a portable printer, allows the lab scientist or crime scene investigator to quickly and easily produce a sketch from any image. This technique is not intended to replace an overall sketch, nor to be performed on every image taken, but just to provide an additional medium on which to record evidence such as bloodstain patterns and footwear marks. These sketches will accurately illustrate in a more 3-D format the scene being processed or item being examined instead of having to rely on the need to draw free hand or the use of pre-made hand drawn/plastic templates.

Acknowledgment

Thanks to Brian O'Hara, Massachusetts State Police (retired), for providing comments on the review of this article.

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An Amusing Method for Covering Bloodstains

Andreas Schweizer
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During an argument between several tamil people an ax was used as weapon. As a result two tamil people were badly injured. The police collected the clothing from several people, all involved to some degree in this incident. The clothing was sent to our service for examination. During the laboratory work, my colleagues noticed blue stains on a shirt of one of the accused. The stains appeared similar to stains or smears produced by a ballpoint pen on fabric. These blue stains were covering bloodstains (Figures 1 and 2). It appeared that the accused has used a ballpen to cover and thus conceal the visible bloodstains on his shirt he could see with his naked eye.. The accused had been given a ball point pen to fill in a personal data sheet during his arrest, One, a photograph, taken shortly after the arrest, the shirt the accused was wearing had no blue ballpen stains on it.

It was a novel idea of the accused to cover bloodstains with blue ink, although his method was rather ineffectual and not that clever as he possibly thought. There were many smaller stains on the shirt that he had not noticed. Also, many reddish brown stains were visible on th inside of the front of the shirt since the blue ink had penetrated completely through the fabric (Figure 3).

Figure 1. View of the outside of the front of the shirt with blue ink stains.

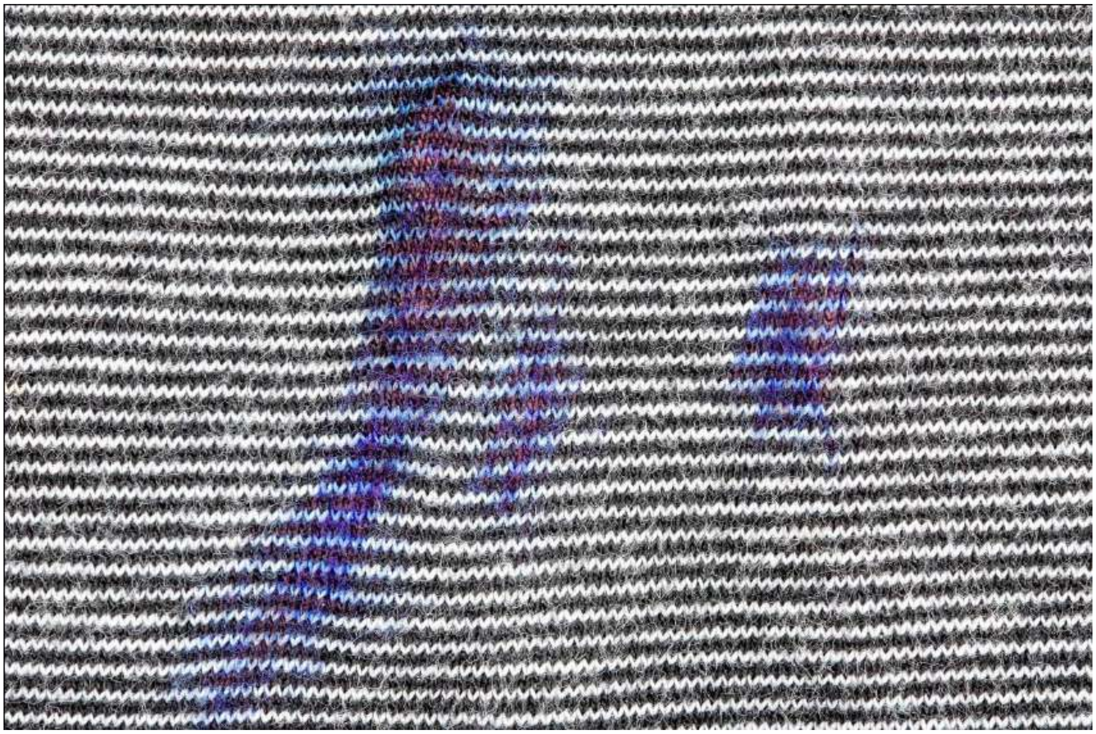

Figure 2. Close view of the blue ink stains on the front of the shirt.

Figure 3. View of the underside of the front to the shirt with reddish brown stains.

Committee Reports for September 2011

Awards Committee
Todd A. Thorne – Chair
tat323@kenoshapolice.com

The Awards committee has received award nomination(s) for consideration. The committee will evaluate the information and make its recommendations. It is not too late, if anyone would like to nominate a member in good standing. Please contact one of the committee members. All nominations are held in strict confidence.

Membership Committee
Norman Reeves - Chair
norman@bloody1.com

The deadline for 2011 applicant submission and requests for promotion has arrived. The committee has processed 121 applications, requests for promotion and associate memberships this year. Lists of applicants and requests for promotions will be available at the Annual conference as per usual. The membership committee members worked hard this year to process the paperwork in a very efficient manner.

Certification Committee
Don Schuessler - Chair
dschuessle@msn.com

The 2010-11 Certification Research Committee is awaiting further direction and additional task assignments from the IABPA board and membership at the annual conference.

Education Committee
Leah Innocci - Chair
linnoc1@gmail.com

The Education committee has finished an Advanced Course Requirements draft and has submitted it to the Board for review. The comments generated by this review will be implemented into another draft. We are continuing our research into bloodstain pattern analysis training programs from around the world. Input from instructors is welcomed. As always, if IABPA members have any comments or input concerning training programs, please contact Leah Innocci.

Internet Committee
Jeffrey Scozzafava - Chair
jscozz@hotmail.com

The Executive Board has approved a new vendor and web design company, www.mediashaker.com. Due to the absence of anyone coming forward to take over the administration of the site, Joe Slemko has agreed to stay on as the webmaster. The construction of the new site will commence in the beginning of September and it is anticipated that a preview will be available for discussion at the 2011 Conference in Milwaukee. The new site will include the capability for a members only area, on-line forms and payment of fees. In addition, there will be the capability for the Association to manage all membership records including invoicing, payment of dues and mass e-mails.

Dan Rahn Grant Committee
Michael Taylor – Chair
Michael.Taylor@esr.cri.nz

This year the committee has had the responsibility to administer the Dan Rahn Memorial research grant and support our current grant holder, Theresa Stotesbury of Trent University, Ontario, Canada. Theresa's project was entitled: *The application of acid yellow 7 for the visualization of impact bloodstain patterns camouflaged on dark surfaces and analysis using the BackTrack™ suite of programs.* It has been completed and Theresa will be presenting her findings at the conference in Milwaukee in October.

A second call for applicants for the 2012 award has been issued and closed on 1 September. An announcement of the successful applicant will be made at this year's IABPA conference.
The committee has also been working with the Board to clarify the wording of the grant to ensure publication of the project report in the Association's journal and to include further support for the grant holder at the annual conference.

ByLaws Committee
Carolyn Gannett - Chair
GannettForensics@aol.com

Drafts of the Code of Ethics, Code of Ethics Enforcement Policy, and the Bylaws were posted on the IABPA website in July for review by the membership. Two versions of each draft are available: one mark-up and the other clean.

Since being published in the Journal, a few changes were made to the drafts of the Code of Ethics and Code of Ethics Enforcement Policy. Those changes are indicated in the mark-up versions. The mark-up version of the Bylaws indicates all the proposed changes to the current Bylaws. The drafts are to be voted on by the membership during the October 2011 Business Meeting.

Legislation Committee
Carolyn Gannett – Chair
GannettForensics@aol.com

The Legislation Committee has been monitoring three items: the developments pertaining to the Forensic Science Regulator in the United Kingdom and the United States draft legislation regarding forensic science reform. If you know of other legislation in the works that may have an impact on practicing the discipline of bloodstain pattern analysis, please e-mail the committee chair at GannettForensics@aol.com.

UNITED STATES: SENATE BILL ON FORENSIC SCIENCE REFORM

Title: S.132 Criminal Justice and Forensic Science Reform Act of 2011
Sponsor: Sen Leahy, Patrick J. [VT] (introduced 1/25/2011) Co-sponsors (None)
No news coverage found as of 09-01-11 (see http://www.opencongress.org/bill/112-s132/show)
No action since January 25, 2011 (see http://www.opencongress.org/bill/112-s132/actions_votes)

UNITED KINGDOM: FORENSIC SCIENCE REGULATOR
The latest on the Forensic Science Regulator can be found at the following link:
http://webarchive.nationalarchives.gov.uk/+/http://www.homeoffice.gov.uk/police/forensic-science-regulator/. No updates since the last IABPA Legislation Committee report were found.

SWGSTAIN Document Review Committee
Kevin Maloney – Chair
MaloneyK@ottawapolice.ca

The SWGSTAIN Document Review Committee did not have any items to review from the April 2011 SWGSTAIN meeting. The next SWGSTAIN meeting is being held in Salt Lake City, Utah in November 2011.

Ethics Committee
Rex Sparks – Chair

Our Ethics committee members are Gillian Leak, Pat Laturnus and Matt Noedel. Over the past quarter, our committee has been busy assisting with the new draft of the associations ethics policy. As stated in my last committee report I cannot say enough about the efforts that were put forth from some of our association members, offering suggestions, asking and answering questions and the actual construction of the draft. Again, a big thank you to all involved.

As of this report, no ethics complaints have been brought forth to the committee for investigation. As such, no action has been required or taken. Thanks to all that are doing so much to further our association. Hope to see all at the Milwaukee conference.

AGM Report 2010-2011 for Europe

Peter Lamb

I am sorry that I can't be with you in Milwaukee but at the moment I will be either asleep or sitting outside a courtroom waiting to give evidence – it may even be that I'm asleep outside a courtroom – who knows!

There have been some really challenging times for us over here, mainly caused by the catastrophic effects of the financial situation we find ourselves in. As you are well aware, the Governments have cut back drastically on our activities and it may be that there are far fewer Europeans at this year's conference, I hope not. For this I am so sorry for Todd who has worked tirelessly this year to keep us all motivated, drive things forward and to organise this meeting – thanks Todd!

We are happy to have contributed to the debates on the IABPA website which will turn out to be a splendid improvement over what we have (no insult intended to the great efforts of those who set it up and ran it).

The list of members and their e-mail addresses has been a challenge but I think that we have all up to date electronic contact details for the fully paid up members in Europe – thanks to all those who helped me get that done.

Applications for membership and upgrades continue to trickle in and I hope that the cutbacks do not affect the numbers of forensic scientists and police who might wish to join us.

In Europe, we had intended to hold our biennial meeting in 2012 but this has not proved possible. However, we are confident that 2013 will see the return of a Conference and it will be held in Edinburgh, Scotland. The venue offers so much in after-work activities, tourism facilities and splendid locations that I'm sure that those who attend will have a great time. If you are wondering about vacations then it's all here- the highlands, the history, your heritage, beaches, technology, whiskey tasting and city tours.

The translation of the IABPA/SWGSTAIN classification and nomenclature is well advanced in Holland and I know that Philippe has hosted a meeting in France to agree some translations. That is also well advanced and agreed – I know it hasn't been easy! We all thought that this may be easy but we quickly realised that there are simply some words and terms that do not translate and we have been active in attempting to agree a way forward. This is near.

I have not heard from other countries yet but I know that Italy has some financial and logistical difficulties and that many Police Forces in Europe are being re-organised in response to the economy, so not much else is happening.

There has been no decline in the demand for BPA courses in Europe and the African/UAE nations. We continue to give training when requested but this isn't resulting in the increase membership of IABPA that we had hoped – we don't know why. Courses are being held regularly with (what we are led to understand) full complements of students, so why the applications don't increase is a mystery.

Having said that there are significant new applicants and requests for promotion to give us confidence that we are still a desired association – there is no viable alternative for anyone who wishes to improve their knowledge and capabilities in the arena of BPA.

It has been a great honour to serve on the IABPA board, and if you'll allow me I'd like to continue. However, the UK Government has seen fit to close the Forensic Science Service as of March 31st 2012. In effect many of us will lose our jobs before Christmas this year and so I'm hoping to get home e-mail addresses as well as work ones so that we can still encourage interchange of experiences and ideas. Personally, I will become unemployed very soon, but that doesn't mean that I've died!!! I will be available to look after my European colleagues, even if it's only by e-mail.

I wish you all a very productive, educational and happy conference; I am so sorry that I can't be there to join in as I have always learned something from these trips.

Best wishes
Peter

Peter Lamb FSBiol. C.Biol. FFSSoc. MIABPA. LISM
Vice President IABPA Europe
Principal Scientist Hairs, Damage and Fibres
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UK

Report from Region VI

Brett McCance
Vice President, Region VI

Region VI continues to grow with further membership applications being received and regular training courses being facilitated at three different levels (Awareness, Intermediate and Advanced). A core group of analysts in this Region are driving bloodstain pattern analysis forward with these robust education and training models and scientifically based research. The biggest accomplishment for Region VI was the inclusion of a bloodstain pattern analysis dedicated session at the Australian and New Zealand Forensic Science Society (ANZFSS) symposium to be held in Hobart, Tasmania, in September 2012.

I wish to thank you and the IABPA Executive Board for the support and guidance Region VI has received over 2011. I am excited to represent Region VI of the IABPA membership at this year's annual conference and will hopefully fulfill the duties of Vice President into 2012.

Membership applications for Region VI of the IABPA were above average. I was glad to see a number of 'Requests for Promotion'. As training courses are facilitated, further membership applications are being received. Several Region VI members however were late to renew their membership, some doing so mid-way through the year.

Membership as of December 31, 2010

- 36 Members in total:
    - 23 full members.
    - 11 provisional members.
    - 2 associate members.

New Membership Applications for 2011:

- 5 provisional memberships.

Requests for Promotion for 2011:

- 4 members provided full membership status.

Membership as of August 31, 2011 – 41 members:

- 41 members in total.
    - 27 full members.
    - 12 provisional members.
    - 2 associate members.

No requests for Associate Membership.

The Australian and New Zealand Forensic Science Society (ANZFSS) Symposium 2012
A Discipline Specific Session – Bloodstain Pattern Analysis

Brett McCance
Vice-President, Region VI

Australia and New Zealand host the bi-annual Australia and New Zealand Forensic Science Society (ANZFSS) symposium which is the largest forensic symposium in the southern hemisphere. In Sydney 2010, the symposium attracted approximately 1000 delegates from 34 countries and delivered over 300 oral presentations and 600 poster presentations. Numerous forensic disciplines are covered at the symposium, such as: anthropology and archaeology, biology, biometrics, chemical criminalistics, counter terrorism and disasters, crime scene, documents, drug-related crime, electronic evidence, entomology, fingermarks, fires and explosions, legal issues, quality assurance, odontology, pathology and clinical medicine, toxicology and pharmacology and wildlife.

In 2012, the symposium will be held in Hobart, Tasmania which is a picturesque island state at the southernmost point of Australia, approximately 240 kilometres across Bass Strait from mainland Australia. Tasmania is a natural paradise with wilderness and wildlife, majestic rivers, pristine beaches and great food and wine. Outside symposium hours, there are many tours and sights to show you what Tasmania has to offer. Workshops will be incorporated before and after the symposium dates of September 23 and 27, 2012 with a social networking calendar scheduled throughout the week. The theme of the symposium for 2012 will be, 'From Convicts to Criminalists: Past, Present and Future.

At times, due to the distance between Region VI (Australia, New Zealand, Eastern Asia and the Pacific Rim) of the International Association of Bloodstain Pattern Analysts (IABPA) and the rest of the world, it can be difficult financially and physically for bloodstain pattern analysts to travel and attend international conferences and related symposiums. Currently, there are no conferences or symposiums within the southern hemisphere that are dedicated to BPA or have BPA related sessions. Earlier this year, the ANZFSS organising committee approved the inaugural BPA dedicated discipline session, which was achieved through the hard work of Liz Williams from the University of Auckland. In the past, bloodstain pattern analysis has fallen under the 'Crime Scene' discipline session and not attracted a large number of presentations or attendance. This dedicated session is a huge step forward for the discipline within Region VI of the IABPA. It is envisioned that the inaugural BPA session will attract analysts from within Region VI of the IABPA to present non-published research, techniques and case studies and encourage the development of new research and contemporary methods from within the discipline. It is also hoped that that it will also excite international analysts and other forensic practitioners to make the journey to Tasmania and see what the ANZFSS has to offer. The call for abstracts and workshops opens October 24, 2011 and closes February 24, 2012. Symposium registration will commence in December 2011. This is a very exciting opportunity for Region VI of the IABPA which is hoped to provide stimulating BPA oral and poster presentations and raise the awareness of the discipline in the forensic community. For further information on the symposium or the BPA session, please contact either:

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Liz Williams
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ESR Ltd, Christchurch Science Centre
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Or alternatively, you can go to the ANZFSS 2012 website: www.anzfss2012.com.au

2011
TRAINING CONFERENCE

October 4-7, 2011
Milwaukee, Wisconsin

2011 IABPA Training Conference, Milwaukee, WI
Week at a Glance—SUBJECT TO CHANGE

Monday, October 3th	Registration	4:00-8:00 pm
	Board Meeting	5:00-7:00 pm
	Welcome to Milwaukee: Light dinner provided for early arrivals	7:00-9:00 pm
Tuesday, October 4th	**REGISTRATION/BREAKFAST (Provided at Hotel)**	7:00 am
	Opening Ceremonies	8:00-8:45 am
	Prof. Herbert MacDonell, *Early Classic BPA Case*	8:50-9:20 am
	Stuart H. James, *Final Voyage*	9:25-10:00 am
	VENDOR BREAK	10:00-10:30 am
	Dr. Lynne D. Herold, *Have You Heard This One?*	10:35-11:15 am
	Norman Reeves, *Shots in the Dark*	11:20-11:55 am
	LUNCH (Provided at Hotel)	11:55-1:00 pm
.	Dr. Acar, *BPA in Turkey (TBA)*	1:15-1:45 pm
	Kacper Choromanski, *BPA in Poland (TBA)*	1:50-2:20 pm
	VENDOR BREAK	2:20-3:00 pm
	DeWayne Morris, *Research Impact Pattern Doc in 3D Real Time*	3:05-4:00 pm
	Dr. Silke Brodbeck, *Coagulation in BPA*	4:05-5:00 pm
Wednesday, October 5th	**REGISTRATION/BREAKFAST (Provided at Hotel)**	7:00 am
	Mike Illes, *Research: BPA & Computers*	8:05-8:35 am
	The Dan Rahn Research Grant Recipient, Introduction: Brian Yamashita	
	Theresa Stotesbury, *Phys. Effects of Acid Yellow 7 on BPA*	8:40-9:45 am
	VENDOR BREAK	9:45-10:00 am
	Annual Business Meeting, IABPA Att. Tim Hawks	10:00-Noon
	LUNCH (Provided at Hotel)	Noon-1:00 pm
	Steven Spingola, *An Afternoon with Dahmer*	1:00-2:30 pm
	Martin Eversdijk, *Enhancement by Water*	2:35-3:00 pm
	VENDOR BREAK	3:00-3:10 pm
	Paul Kish, *Visualization of Latent Bloodstains*	3:15-3:35 pm
	Ted Silenieks, *Live Imaging of Bloodstains on Dark Fabric using near IR*	3:40-4:00 pm
	T.P. Sutton, BPA *For the Medical Examiner's Office*	4:05-4:35 pm
	Elizabeth Toomer, *Research: Stage v. Real Blood*	4:35-5:00 pm
	EVENING FORUM: *Bring Your Own Case*	7:00 pm -12 mid

Thursday, October 6th	**BREAKFAST** (**Provided at Hotel**) …………………………………………	7:00 am
	AM WORKSHOPS ………..…………………………………………........	8:00 am-Noon
	Of What are We Made: Intro to Basic Body Tissues ……………………..…	Dr. Lynne Herold
	BPA on Clothing ……………………………………………………..…	Jane Taupin
	Ethics in Forensic Science: Application of Code Content to Scenarios …..	Carolyn Gannett
	Computer-Aided BPA …………………….…………………………….	Mike Illes
	Courtroom Testimony - Responding to Cross-Examination	
	8-10 am & 10-noon ONLY…………………………	Stuart H. James & LeeAnn Singley
	LUNCH (**Provided at Hotel**) ………………………………..…………….	Noon-1:00 pm
	PM WORKSHOPS: Repeat of morning workshops ……………………...…	1:00-5:00 pm
	DINNER BANQUET …..……………………………………………………	7:00-12:00 mid
Friday, October 7th	Jon Thomas, *Case Study* ……………..……………………………………….	8:00-8:30 am
	Rex Sparks, *Wound Analysis and BPA* …………………………………….....	8:35-9:05 am
	Mikle van der Scheer, *If the Right Question is not Asked* …………..…..……	9:10-9:30 am
	Cele Rossi & Stuart H. James, *Fallen Angel - Homicide or Suicide?* …..……	9:35-10:05 am
	BREAK ....………………………………………………..………	10:05-10:20 am
	Young Il Seo, *Research with BPA and High Speed Camera* …………..…….	10:25-10:45 am
	SWGSTAIN/NAS Update, *David P. Baldwin* …………..…………..……...…	10:50-Noon
	IABPA 2011 Concludes ……………………………...………...…….……	12:00 pm

Note: Conference attendees are responsible for their own dinners, excluding the dinner banquet on Thursday, October 6, 2011.

Abstracts of Recent BPA Related Articles in the Scientific Literature

Bossers, L.C., Roux, C., Bell, M., and McDonagh, A.M., Methods for the Enhancement of Fingermarks in Blood, Forensic Science International, Vol. 210, Issue 1, July 2011.

Abstract:

Fingermarks formed in or by blood often require specific development techniques. This review examines techniques and materials that may be used to enhance and record fingermarks deposited in blood or fingermarks generated by blood-contaminated papillary ridges. A large number of techniques are presented here and are discussed from a chemical as well as a practical perspective. It is concluded that an optimized sequence of techniques targeting both latent (non-bloody) and bloody fingermarks must be applied to detect and enhance the maximum number of marks, and therefore optimize the information content from exhibits that may bear marks in blood.

Li, B., Beveridge, P., O'Hara, W.T., and Islam, Meez, The Estimation of the Age of a Bloodstain using Reflectance Spectroscopy with a Microspectrophotometer, Spectral Pre-processing and Linear Discriminant Analysis, Forensic Science International, Vol.212, Issue 1, pages 198-204, October 2011

Abstract:

A novel method for the non-destructive age determination of a blood stain is described. It is based on the measurement of the visible reflectance spectrum of the haemoglobin component using a microspectrophotometer (MSP), spectral pre-processing and the application of supervised statistical classification techniques. The reflectance spectra of sample equine blood stains deposited on a glazed white tile were recorded between 1 and 37 days, using an MSP at wavelengths between 442 nm and 585 nm, under controlled conditions. The determination of age was based on the progressive change of the spectra with the aging of the blood stain. These spectra were pre-processed to reduce the effects of baseline variations and sample scattering. Two feature selection methods based on calculation of Fisher's weights and Fourier transform (FT) of spectra were used to create inputs into a statistical model based on linear discriminant analysis (LDA). This was used to predict the age of the blood stain and tested by using the leave-one-out cross validation method. When the same blood stain was used to create the training and test datasets an excellent correct classification rate (CCR) of 91.5% was obtained for 20 input frequencies, improving to 99.2% for 66 input frequencies. A more realistic scenario where separate blood stains were used for the training and test datasets led to poorer successful classification due to problems with the choice of substrate but nevertheless up to 19 days a CCR of 54.7% with an average error of 0.71 days was obtained.

Organizational Notices

Moving Soon?

All changes of mailing address need to be supplied to our Secretary Norman Reeves. Each quarter Norman forwards completed address labels for those who are members. Do not send change of address information to the Bloodstain Digest Editor. E-mail your new address to Norman Reeves at:

norman@bloody1.com
Norman Reeves
I.A.B.P.A.
12139 E. Makohoh Trail
Tucson, Arizona 85749-8179
Fax: 520-760-5590

Membership Applications / Request for Promotion

Applications for membership as well as for promotion are available on the IABPA website:
IABPA Website: http://www.iabpa.org

The fees for application of membership and yearly dues are $40.00 US each. If you have not received a dues invoice for 2011 please contact Norman Reeves. Apparently, non US credit cards are charging a fee above and beyond the $ 40.00 membership/application fee. Your credit card is charged only $40.00 US by the IABPA. Any additional fees are imposed by the credit card companies.

IABPA now accepts the following credit cards:

Discover MasterCard
American Express Visa

Training Opportunities

October 31-November 4, 2011
Basic Bloodstain Pattern Analysis Course
Basiskurs Blutspurenmusteranalyse
Usingen, Germany
(German)

For further information contact:
Dr. Silke Brodbeck, MD
Blutspureninstitut
Obergasse 20
61250 Usingen
Germany
Tel: +49-170-84 84 248
Fax: +49-6081-14879
E-mail: info@blutspureninstitut.com

December 5-9, 2011
Basic Bloodstain Pattern Analysis Workshop

Presented by the Specialized Training Unit at the Miami-Dade Safety Training Institute, Doral, Florida

Contact: Toby L. Wolson, M.S., F-ABC
Miami-Dade Police Department
Forensic Services Bureau
9105 N.W. 25th Street
Doral, Florida 33172
Voice: 305-471-3041
Fax: 305-471-2052
E-mail: Twolson@mdpd.com

March 5-9, 2012
Basic Bloodstain Pattern Analysis Workshop

Presented by the Specialized Training Unit at the Miami-Dade Safety Training Institute, Doral, Florida

Contact: Toby L. Wolson, M.S., F-ABC
Miami-Dade Police Department
Forensic Services Bureau
9105 N.W. 25th Street
Doral, Florida 33172
Voice: 305-471-3041
Fax: 305-471-2052
E-mail: Twolson@mdpd.com

December 3-7, 2012
Basic Bloodstain Pattern Analysis Workshop

Presented by the Specialized Training Unit at the Miami-Dade Safety Training Institute, Doral, Florida

Contact: Toby L. Wolson, M.S., F-ABC
Miami-Dade Police Department
Forensic Services Bureau
9105 N.W. 25th Street
Doral, Florida 33172
Voice: 305-471-3041
Fax: 305-471-2052
E-mail: Twolson@mdpd.com

Articles and training announcements for the December 2011 issue of the Journal of Bloodstain Pattern Analysis must be received before November 15th, 2011

Editor's Corner

The Journal of Bloodstain Pattern Analysis is off to a good start with an increase in peer-reviewed articles published. I thank Associate Editors, Carolyn Gannett and Daniel Mabel for their excellent and timely review of submissions.

The December issue will contain the abstracts of the presentations given at our Annual Training Conference in Milwaukee, Wisconsin during the first week in October. President Todd A. Thorne has assembled an excellent program. I invite the presenters to submit their papers to the Journal for pre-publication review.

As a reminder, I do have the IABPA NEWS publications dating from the first issue in 1983 in pdf format if anyone is looking for an older article. I have responded to several requests from University and Crime Laboratory libraries.

Stuart H. James
Editor
jamesforen@aol.com

Past Presidents of the IABPA

V. Thomas Bevel	1983-1984
Charles Edel	1985-1987
Warren R. Darby	1988
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Edward Podworny	1991-1992
Tom J. Griffin	1993-1994
Toby L. Wolson, M.S.	1995-1996
Daniel V. Christman	1997-1998
Phyllis T. Rollan	1999-2000
Daniel Rahn	2001-2002
Bill Basso	2002-2006
LeeAnn Singley	2007-2008

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Associate Editors

The Journal of Bloodstain Pattern Analysis published quarterly in March, June, September, and December.