THE "NEWSLETTER"

OFFICIAL PUBLICATION OF THE
THE UTAH DIVISION OF THE I.A.I.
INTERNATIONAL ASSOCIATION OF IDENTIFICATION

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PRESIDENT'S MESSAGE

by
Vice President Kent W. Timothy

In line with my desire to see more training come to Utah, last month we had Will Sampson come to Utah and conduct his class on fingerprint recovery from human skin. If you thought it wasn't possible I can tell you it is. What a class!!!

I hope by now you have all received the mailer concerning the forensic conference that is being sponsored by the Prosecution Council Office and the Utah Division of the IAI. This promises to be not only informative but important for further enhancing cooperation and coordination between police and the legal community. If at all possible, be there. There is another important reason for you to attend the fall meeting, the election of another Vice-President. This past year Don asked me to function as the President. The Division needs a V.P. to help fill a position on the board.

Again, in relation to training, if any of you have been to a recent training class and would like to see it brought back to Utah or you are aware of a subject that ought to be taught, or a class you would like to teach, contact me by mail, E-mail or phone at 3600 West Constitution Blvd.,West Valley City, Utah 84119:

E-mail **ktimothy@ci.west-valley.ut.us**
Phone 801-963-3229, Fax 801-963-3333.

There is a new addition to the Utah Division staff. Detective LaMar Burns of West Valley Police Department has agreed to take over from Scott Spjut as the Newsletter Editor. LaMar is imaginative and inventive and a valuable addition to the staff. He is also receptive of suggestions concerning the content or presentation of the newsletter.

INSIDE THIS ISSUE

THE UTAH DIVISION I.A.I. STAFF

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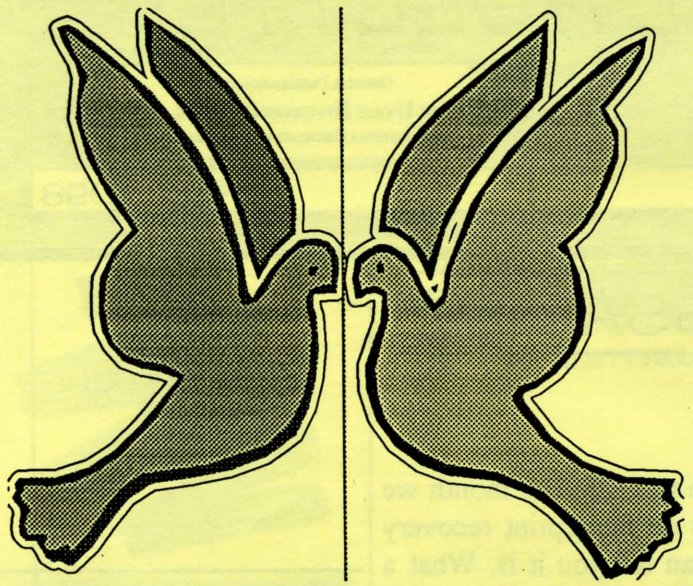
This Quarters Quote:

"ALL FOR ONE AND ONE FOR ALL"

Our attitude in the Forensic-Field should reflect the old Musketeers slogan, "All For One and One For All." Lets share our accomplishments by sending them in to be published.



POSITION REVERSAL LATENTS: TRANSFERRED PRINTS

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Cases of position reversal latents, also known as lateral transfer prints, are being reported more frequently than ever before in the literature. Many who have stumbled across these occurrences believe they may not be rare at all but are simply overlooked and unidentified by fingerprint examiners who are not aware of the possibility of a transferred latent print.

In just the last few years in the United States, numerous cases have been reported. In Massachusetts, reversed prints on a glass marijuana growing box were discovered to have been transferred from tape previously used to hold sheets of cardboard on to the box.[1] In California, a latent print from the exit door of a convenience store was found to be a reversed print of the murdered store manager.[2] It was theorized the print had been transferred from tape used to hold a notice to the glass door, which had been removed prior to the robbery-murder. In Illinois, reversed prints were found on the non-adhesive side of tape on a piece of cardboard covering the broken window on a stolen car.[3] In Louisiana, a dry cleaner's bag wrapping a stolen stereo was found to have reverse-image prints.[4] In Texas, the outer layer of plastic packaging on a bundle of marijuana was found to have a reverse image print.[5]

In other cases, examiners have related incidents directly to the author. In some areas of Florida, it is reportedly not unusual to find transferred prints on plastic bundles of narcotics stacked in the holds of ships. In another state, a fingerprint examiner told of finding a latent print on the slide of a semi-automatic handgun which he identified as a reverse print of an officer. It turns out the gun, when collected at the scene of a drive by shooting, had been placed on top of a plastic garbage bag in the officer's trunk for transport to the lab. It was believed a print on the plastic garbage bag had come in contact with the gun during transport, and transferred.

In the State laboratory where I worked for eight years in Arizona, we found that it was not unexpected to find reverse prints alongside of cuts in contact paper on bales of marijuana. We knew that the bales coming out of Mexico were normally wrapped in cling wrap. Once in the United States, it was common for drug middlemen to apply a layer of adhesive shelf paper around the cling wrap. We speculated that when a potential customer would slice through the layers of wrapping material to sample the marijuana inside he would reseal the cut with tape. Since he would have touched the sticky side of the tape, those prints would transfer to the contact paper. Frequently, the tape was gone by the time the bales were submitted to the laboratory for drug analysis and fingerprint examination, but the reversed prints were still on the contact paper next to the cut.

In one case I personally examined, I found an entire reversed palm print on the inside surface of a crinkley

plastic grocery bag. It corresponded perfectly with the same palm print in correct position on the outside surface of the bag. I believe something smooth with a film of residue was inside the bag. The pressure of the friction ridges was enough to impress through the plastic bag and cause the residue to be transferred onto the inside of the bag in the image of the palm with ridges, creases, and all. Although in my case, the print was still on the outside of the bag as well, I can imagine circumstances in which such a print on the outside on the bag may be wiped off, or the person's skin might be so dry no print would be deposited on the outer surface of the bag at all.

One clue to a transferred print is a blotchy appearance under magnification of the ridges. This is probably caused by excessive residue in the original print being pressed too tightly between the surfaces at the time of transfer. Another clue is that sometimes the print appears more like an out-of-focus image one might expect from a careless photograph. Again, I suspect the reason is the spreading of the residue during transfer. Another clue is that, occasionally, crease marks show up in the transferred print as a result of wrinkles in the original plastic surface on which the print was first deposited.

The best way to become familiar with the appearance of a transferred print is to intentionally transfer some latent prints and develop them, then examine them under a magnifier. Start with a clean plastic surface, such as a zip-lock bag. Deposit a moderately heavy latent rich in sebaceous material. Lay the plastic surface on a smooth, non-porous surface, such as glass, with the latent sandwiched between the surfaces. Gently press the plastic so some of the residue transfers from the plastic to the second surface. Now process the second surface using the methods you would normally use on such a surface. Compare the resulting latent with a direct touch to the same surface. After a few such efforts, you will easily be able to recognize a transferred print and will know to compare it as a position reversal.

Traditionally, authors of fingerprint texts have omitted reference to the possibility of laterally reversed latent prints, with one exception. In his book, *Friction Ridge Skin,* James F. Cowger expresses his observation that such occurrences are exceedingly rare.[6] I am not totally convinced of that. I suspect that laterally reversed prints are far more common than thought. I believe the reason transferred prints are not identified more frequently is that we simply do not look for them. Especially when dealing with plastic surfaces or surfaces onto which tape may have previously been placed, one should always be aware of the possibility of a transferal. If we all did comparisons in both normal and reverse orientations on these surfaces, I suspect we would find these occurrences are not so rare as previously thought.

References:

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2. Valverde, Michael, San Jose Police Department, California, personal communication, May 1997.
3. Zorich, Susan R. "Laterally Reversed Cyanoacrylate Development Prints on Tape," *Journal of Forensic Identification,* Vol. 42 No.5 (September/October 1992) p396.
4. Lane, Patrick A., Martha Hilborn. Sibyl Guidry, and Carol E. Richard, "Serendipity and Super Glue: Development of Laterally Reversed, Transferred Latent Prints, *Journal of Forensic Identification,* Vol.38, No. 6 (November/December 1988) p292.
5. Rifenberg, Jimmy, "Inside/out," *Lone Star Forensic Journal,* Vol.52 No.1 January-March, 1998, p9.
6. Cowger, James F., *Friction Ridge Skin: Comparison and Identification of Fingerprints,* Elsevier, New York, 1983, pp 185-186.

THE USE OF A "BLOTTER" TO ENHANCE NINHYDRIN DEVELOPED LATENT PRINTS

Jon T Stimac
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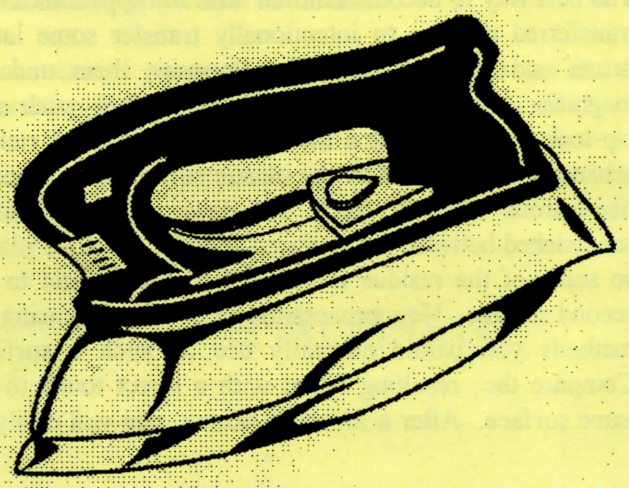
Once a porous item is processed with Ninhydrin, several different methods for developing and enhancing the latent fingerprint impressions have been documented - from simply allowing the processed item time to develop naturally, to the use of heat and steam for accelerated development. If allowed to develop naturally, most sources within the latent print community report that the ninhydrin reaction with trace deposits of Amino Acids can often take several days, if not weeks to become visual. Many agencies cannot allow such time lapses to occur and the reaction process is greatly accelerated with the use of heat and humidity. Humidifier ovens can be utilized to enhance fingerprint detail, but a simple house hold clothing iron is probably a common sight in many latent print laboratories. By properly applying the iron's combination of heat and humidity at a safe distance above the processed item, helps expedite purple ridge detail that is commonly termed, Ruhemann's Purple.

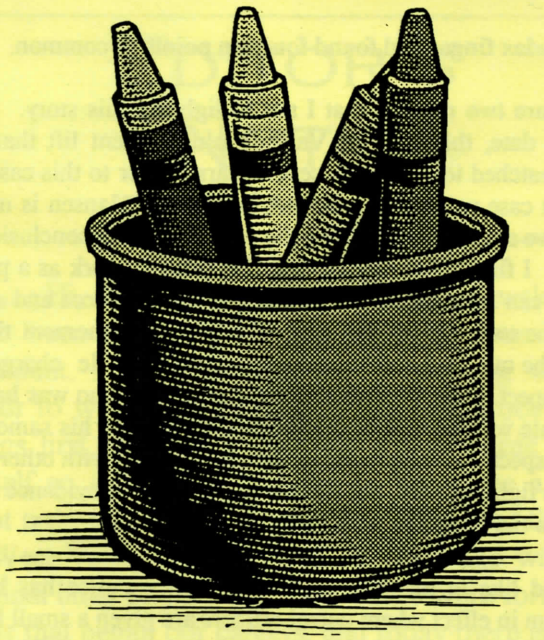
THIS "BLOTTER" PAPER ACTS AS A BUFFER BETWEEN THE PROCESSED ITEM AND THE HUMIDITY CREATED BY THE IRON,...

However, the heat and humidity from the iron can also cause problems. England's Scientific Research and Development Branch, Home Office, confirm in their *Manual of Fingerprint Development Techniques* what most users of this technique have discovered first hand: too much humidity from the clothing iron may cause diffusion of ninhydrin developed fingerprint ridge detail.[1] A diffused latent print may be impossible to identify. Too much heat from the iron may cause the processed item to display intense background staining, which can interfere with latent contrast quality.

A recently adapted technique consists of applying a clean, white sheet of paper (larger than that of the processed item) directly over the processed ninhydrin item and then closely applying the clothing iron above the paper. One utilizes, its heat and humidity, just as one would do with the traditional household iron technique. This "blotter" paper acts as a buffer between the processed item and the humidity created by the iron; thus allowing for "humid conditions," but eliminating the problem of diffused latent prints caused by the direct contact. Significantly enhanced latent prints have been noticed when this technique has been applied. Even latent prints allowed to develop naturally may be significantly enhanced.

Although this "blotter" technique may be and excellent approach to fully use humidity and yet avoid the problems of creating a diffused latent print, concern should still be focused on the heat created from the iron. With the use of this "blotter" method, it is still





possible to create the background staining dilemma caused by the application of too much heat. So periodically check the processed item for both enhanced ridge detail and background staining.

As mentioned earlier, ninhydrin's reaction to deposited amino acids may take several days to appear naturally, so it is recommended for the optimum effects of ninhydrin to occur, the processed item be allowed to develop naturally in a dark area and with slight humidity for a minimum of 24 to 48 hours [2], [3]. The application of this blotter technique can then be used for further enhancement but with strict observation to heat - avoid background staining caused by excessive heat.

Experiment! If not currently using this method, do not rush to your agency's "To Be Worked" file and begin to use this process. Experiment first with known standards and samples you make on your own. Blow on your hand, just as one would if they were cold to create a known sample. Don't create a sample by rubbing your finger on your nose or forehead - you're after amino acids secreted from Eccine glands, not fats from Sebaceous glands. Try this technique with different porous "evidence" items and explore the use of different blotter materials along with the experimentation of different application methods (apply the iron 1", 2", or 6" above the blotter, also try direct iron application onto the blotter, but again, beware of background staining!).

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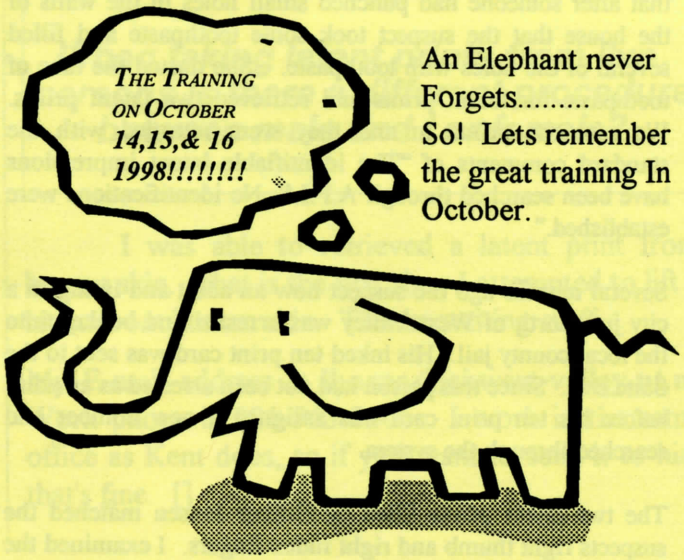
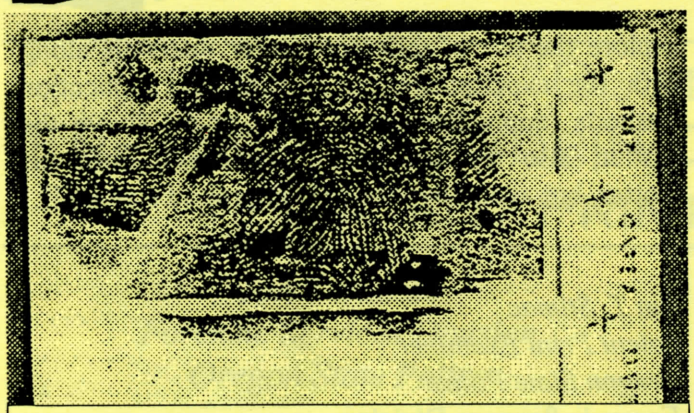
1 Scientific Research & Development Branch, *Manual of Fingerprint Development Techniques:* Ninhydrin, Home Office, 1986, pp 6.

2 Margot, P.A.; Lennard, C.J., *Fingerprint Detection Techniques*, Institut de Police Scientifique et de Criminoligie, 1994, pp 73.

3 Almog, J,; Lee, H.C.; Gaenssien, R.E., *Advances in Fingerprint Technology,* Eisevier, 1991, pp 114.



An Elephant never Forgets.....
So! Lets remember the great training In October.



Here is the first lift from the tube. The two latent prints are the thumb and the index fingers and were deposited while squeezing the tube.

AN A.F.I.S. HIT

LaMar A. Burns
Forensic Services Unit
West Valley City Police

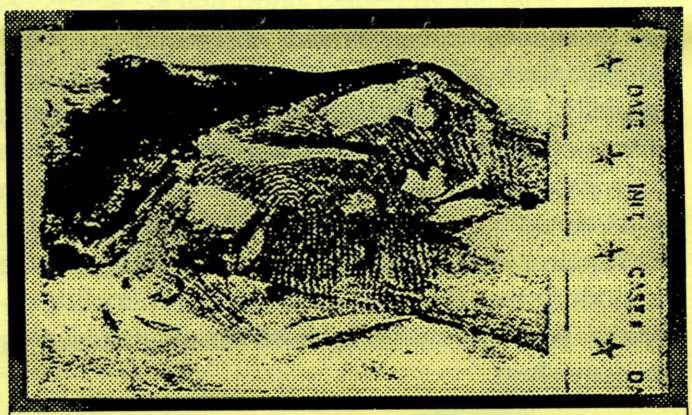
We had an interesting identification case come in from BCI on one our AFIS requests from 1991. One of West Valley's finest, Patrol Officer Rebecca Jansen responded to a residential burglary in September 1991. A house had been broken into and many items were stolen along with an extensive amount of vandalism to the inside of the house. Rebecca saw that after someone had punched small holes in the walls of the house that the suspect took some toothpaste and filled several of the holes with toothpaste. She dusted the tube of toothpaste for latent prints and retrieved two latent prints. We sent the prints in and they were returned with the standard comments of "The identifiable latent impressions have been searched through A.F.I.S. No identifications were established."

Several months ago the suspect now an adult and living in a city just north of West Valley was arrested and booked into the local county jail. His inked ten print card was sent to the State BCI. Since this person had not been arrested as an adult before his ten print card was assigned a new number and searched through the system.

The two latent prints lifted by Officer Jansen matched the suspects right thumb and right index fingers. I examined the right index finger and found fourteen points in common.

There are two reasons that I am hi-lighting this story. One, that to date, this is West Valley's oldest latent lift that has been matched to a suspect, seven years. Prior to this case the earliest case was 1993. Second, that Officer Jansen is now a detective and will be working the case to its final conclusion in court. I find it fascinating that this officers work as a patrol officer can have such a twist. I talked with Rebecca and at the time she took the lift she never thought for a moment that it would be matched and have the opportunity to file charges on the suspect. The Victims had a teenage son, who was having a dispute with several of the neighborhood boys his same age. The suspect was mentioned in the report along with other boys he was fighting with, but there was no physical evidence to tie them to the crime.

I would like to mention that West Valley Police has had a program in effect where patrol officers are given a small latent fingerprint kit with brushes and powders, etc. This has resulted in numerous bandits fingerprints being lifted and identified that normally would not. In 1996 there were 14 identifications made from patrol officers submitting latent lifts. In 1997 we had 23 similar identifications. I do expect a good turn out for 1998.



Here is the second latent print lifted from one side of the tube of toothpaste, (1991).

FORENSICS EVIDENCE CONFERENCE

OCTOBER 14-16, 1998

OGDEN EGYPTIAN CENTER-WEDNESDAY
OGDEN MARRIOTT HOTEL-THURSDAY/FRIDAY

EDITOR'S NOTE.

BY LAMAR BURNS

Hi, As mentioned earlier in this newsletter I have been asked to be the editor by our Vice-President. I accepted and find it exciting and an honor to work on a project of this magnitude. First things first, I would like to say a few words about myself so maybe you can get to know me a little. Kent mentioned that I am a police officer for the city of West Valley. I was hired 18 years ago with the original hires on July 1, 1980. There were forty-five of us that began our careers, and today there is more than 141 sworn officers. I have always enjoyed being able to take the bad guys to jail while I worked the road for nearly sixteen years. Working in the field of forensics is an extension of that satisfaction.

I would like to suggest that we give *our* newsletter a name. Most of the publications I read have some unique name or saying that sets them apart from the rest. I would like our paper to have that same distinction or uniqueness. I propose that we, all of you out in the field, decide on a name and have everyone have a chance to suggest a name.

The first name to consider is *THE RAP SHEET*. The definition of RAP is to talk or discuss with one another and this newsletter is a prime example of how we can share ideas and learn at the same time. Between now and December 10, 1998 I will be accepting suggestions on a name for our paper and a short three or four sentence response of the reasons why it should be named that. I will then present all the names to the staff and they will vote on which name is most appropriate. The results will be appear in the next issue. Lets be creative and send in your ideas.

Kent Timothy briefly touched on the class with Will Sampson and what a great learning experience it was. I would like to have a section in the newsletter set aside for a brief summary of the training classes that you have attended since the last issue was sent out. Your opinions and observations are import to us and it helps us evaluate if we are truly giving you what you like and need in the way of training.

I would like some additional feed back on Will Sampson's class also.

When taking latent prints from live persons is there a different procedure between male and / or female?

I was able to retrieved a latent print from human skin. That is the first time I attempted to lift a latent from human skin. This is exciting stuff.

My E-mail address is **lburns.@ci.west-valley.ut.us** Work phone is 801-963-3506. I work in the same office as Kent does, so if you want to send it to him that's fine. []