Handwriting Comparison Using ESDA Lifts

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Abstract:

Forensic document examiners frequently utilize electrostatic detection methods to visualize indentations on paper. Typical indentation examinations can resolve sequencing issues, determine a source document, or provide investigative leads. Rarely are ESDA lifts utilized for handwriting comparison. This poster illustrates a case where written indentations developed with ESDA were compared to known writing. Factors that limited the comparison included overlapping of indentations and the lack of subtle features. The source document of the indentations was subsequently obtained and another handwriting examination was conducted. Detail that was not present in the ESDA lifts was observed in the writing resulting in identification of a writer.

Case Information:

This case began in April 2002 with the disappearance of a twenty nine year old mother of two from her residence in Syracuse, New York. Onondaga County Sheriff's detectives submitted lined paper from the woman's home for indentation analysis. An ESDA examination developed indentations indicating a suicide note had been written, although none was located.

In 2006, Cold Case Investigators submitted known writing of the missing person for handwriting comparison to ESDA lifts developed in 2002. Although some similarities were noted between the ESDA lift indentations and the known writings, they were not sufficient for identification.

In January 2008, State Police divers on a training exercise near Onondaga Lake located a submerged vehicle that contained the missing person and a suicide note. Comparison of the suicide note to exemplars of the victim resulted in her identification as the writer.

One of several ESDA lifts developed from two sheets of paper recovered at the missing person's residence.

4/16/02 I don't & where to Stept Jus can't use this the gon E thing I try to do Facts is sannot of for them. Look at my house I isok at and house I isok at a do and the a set tess enough to why I'm world I'm uch low me gre about La th.selves take cure of then hey will that they do Tone then pret watch then sutter with me any nore the need a REAL cure of all their weds

Transparency film was utilized to copy written indentations developed with ESDA. Decipherment of indentations indicated a note that was two pages in length.

IF I do make it through this The I don't want to see any comy Friends or family any thing Just of que. hate myse ate my 16t 29/14 mother The runed their li The want them to live Tina s and Andrew (Drew) lives Henshaw , 11 Haup Ale toke care of the the

Transparency of second page of suicide note deciphered from ESDA lifts.

ESDA Lift	Known Writing	
4/16/02	3/14/02	
18	8-to 10	
TO, to	to to	
do	clo	
N. Re	like	
Amende	Friends	

Some features such as letter design, format, and connecting strokes were observed in the ESDA lifts and known writing.



Photograph of recovered car containing missing person and suicide note. The two-page suicide note was recovered from a plastic bag inside the vehicle interior, six years after disappearance.

10:07 don't Know where to star just can't live like this do fails 10 1Cry much Sd ANJAZO - Hilm. tor a/ Ow m Pinne ME hre oug hey oul selves nno 11 in de de H em! Sufer me em IN EXL tre NEP grag Can ta Nerds

First page of note recovered from vehicle.

+ Au 5 ma du m an

Second page of note recovered from vehicle.

ESDA Lift	Recovered Note	Known Writing
s)7.	in	including
Justy	Hing.	Humic
setter	and	and
The All	Hor	Um
Times	Know	know
Pyles	could	Couldn't.

Some features, which were not developed on the ESDA lifts, were observed in the note recovered from the vehicle. These included subtle connecting strokes such as the "I dot" connection to the letter "n".

Summary:

The comparison of written indentations developed with ESDA to the known writing of an individual is uncommon. In this case the comparison was useful as an investigative aid prior to the discovery of the missing person and the actual note. It provided direction for the ongoing investigation.

Upon reflection, comparison of handwriting using ESDA lift indentations is somewhat analogous to examining a poor photocopy. An FDE needs to be conservative in opinion due to the lack of detail and the absence of the original document, but an opinion can be expressed. In this case the later recovery of the suicide note (source document of the indentations) provided the necessary details for an identification to be made.