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Forensic Services Department
Victoria Police Forensic Services Centre,
31 Forensic Drive,
Macleod, 3085



Case No: 012753/190

VICTORIA POLICE

STATEMENT**David James BLACK****STATES:**

I am a Forensic Scientist employed at the Document Examination Unit of the Victoria Police Forensic Services Department, Forensic Drive, Macleod. I have been employed at the unit since 1987 and have been authorised by the Department to undertake all categories of examinations and to report on the results of such examinations.

I hold a Degree of Bachelor of Science from Monash University (completed in 1983) majoring in Chemistry. I also hold a Graduate Diploma of Information Technology from Swinburne University (completed in 2000). I also regularly participate in collaborative proficiency testing.

My duties include the comparison of handwritten text and signature formations, the examination of typewriters, printers, and photocopiers as well as the examination of documents for indentations, alterations, obliterations and erasures.

My course of training has included personal tuition and training from recognised examiners, police courses, industry specific courses and specialised training from academics within various forensic and specialist fields. I have instructed and trained other members in forensic document examination methods and techniques, supervised graduate research projects involving forensic document examination and participated in joint research projects with other police organisations.

I am a member of the Australian and New Zealand Forensic Science Society (ANZFSS), Victorian Branch and I abide by the Society's Code of Professional Practice. I am also a member of the Australasian Society of Forensic Document Examiners Incorporated (ASFDE Inc) and abide by the society's Code of Ethics.

I have examined the following:

- Item 1.1 An email printout bearing printed entries including: 'Subject: Updated: WEEKLY TASKFORCE MEETING...'
- Item 1.2 A page bearing printed entries commencing: 'BRIARS TASK FORCE UPDATE...'
- Item 1.3 A page bearing printed entries commencing: [REDACTED]' and handwritten entries commencing: "Note mtg...".
- Item 1.4: An email printout bearing printed entries including: 'From: Wilson, Rod...'

Note: The documents, items 1.1 to 1.4, were submitted as questioned.



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Examination Requested

It was requested that:

1. The documents, items 1.1 to 1.4, to be examined for indentations.
2. Handwritten entries on the document, item 1.3, be examined to determine if the original entries under obliterations can be deciphered.

Methodology Overviews

Refer to Annexure A and B for an overview of the methodologies used.

Results of Examination

No significant indentations were detected on the documents, items 1.1 to 1.4.

It was not possible to determine what the original entries were underneath the obliterations on the document, item 1.3.


David James BLACK

I hereby acknowledge that this statement is true and correct and make it in the belief that a person making a false statement in the circumstances is liable to the penalties of perjury.


David James BLACK

Acknowledgment made and signature witnessed by me

at 3:10 ~~am~~/p.m. on 29th October 2019

at the Victoria Police Forensic Services Centre.



Linda Jones
Forensic Officer - 5
Document Examination Unit
Victoria Police Forensic Services



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Annexure A Indentation Examinations

Overview

Indentations are markings or imprints on the paper surface usually caused by the pressure of a writing instrument on the pages of paper above. Documents are typically examined for indentations either by the use of an Electrostatic Detection Apparatus (ESDA) or oblique lighting techniques.

Electrostatic Detection Apparatus

Description of the Electrostatic Detection Apparatus (ESDA)

The Foster & Freeman Electro-Static Detection Apparatus (ESDA) is a piece of equipment Document Examiners commonly use for the detection and enhancement of latent indentations that may be contained in documents. The ESDA works through principles of electrostatics although the exact mechanism is as yet to be confirmed.

Operation of the ESDA

The questioned document is placed onto a porous conducting plate. A vacuum holds the document firmly in place. A thin sheet of polymer is then placed over the document. The vacuum maintains this sheet in close contact with the document, effectively sandwiching it between the plate and the polymer sheet. A high voltage is applied to a wire in a hand-held wand called a corona and this is passed over the document several times to impart a charge to the surface of the polymer. It is theorised that disturbances in the paper fibres caused by indentations result in a different level of charge to be retained in the polymer sheet overlaying their location.

The operator then applies a material similar to photocopy toner to the plate. The toner adheres to the areas of different charge that overlay the indentations in the document underneath. The density of the toner is proportional to the level of charge on the polymer surface. In order to preserve the visualised indentations, a sheet of contact adhesive is placed over the polymer sheet to lock the toner particles in place and the original document can be removed unaffected. The result is generally referred to as an ESDA 'foil' and can be stored as a permanent record of the detected indentations.

Limitations

The results obtained from the ESDA can vary depending upon a number of factors:

- The quality and thickness of the paper
- Any folding and tearing in the paper
- The relative humidity of the examination room
- The moisture content of the paper
- Any excessive handling of the document (fingerprints)
- The storage conditions the document has been kept under
- The nature of the indentations themselves (e.g. typewriting vs. handwriting)



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It is also known that solvent damage such as the saturation of the document or the examination of it for fingerprints can adversely affect indentations or eliminate them altogether.

Oblique Lighting Techniques

In some circumstances, an electrostatic examination of a document is not possible or practical. In these instances, indentations are detected and interpreted visually by observing shadows created when an oblique (low angle) light source is applied to a document. This is known as an 'Oblique Light Examination'.

An Oblique Light Examination is based only on the visual recognition and interpretation of characters by an examiner.

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Annexure B**Image Enhancement****Overview**

A variety of enhancement techniques can be applied in the examination of documents for ink comparisons, counterfeit identifications, restorations, alterations, obliterations and erasures. These techniques can be broadly classified into Optical, Chemical and Digital.

Optical Enhancement

Optical enhancement methods include the examination of documents using transmitted, coaxial and oblique lighting with visible, ultraviolet or infra-red light sources to observe differences in reflectance or fluorescence.

Chemical Enhancement

Chemical enhancement methods refer to the treatment of documents or surfaces with chemicals that will maximise the difference in contrast between the subject and an unwanted background.

Digital Enhancement

Digital enhancement or image processing refers to the application of computer based algorithms to a digital image in order to enhance or diminish the visibility of various fields within that image.

Limitations

Image enhancement of any kind (optical, chemical or digital) relies on the notion that there is something there in the first place to be restored or enhanced. They are not effective in visualising latent information that is not present.

References

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