Questioned Documents Overview

The Questioned Documents section analyzes documents involved in criminal activities. A document is defined as anything upon which a mark is made for the purpose of conveying a message. Documents may be involved not only in forgery cases but also in homicides, burglaries, robberies and other types of crime.

Forensic Document Examination should not be confused with graphology where handwriting is claimed to be an indication of the character and personality of an individual.

The GBI Crime Laboratory officially stopped offering handwriting examination as a service provided by the laboratory on May 31, 2013. Any agency needing this type of analysis should contact the FBI laboratory or private examiner directly. DOFS Operations bulletin 2013-03 provides more information on this topic.

Louis Kriel – Manager, HQ Impressions Section, 404-270-8181

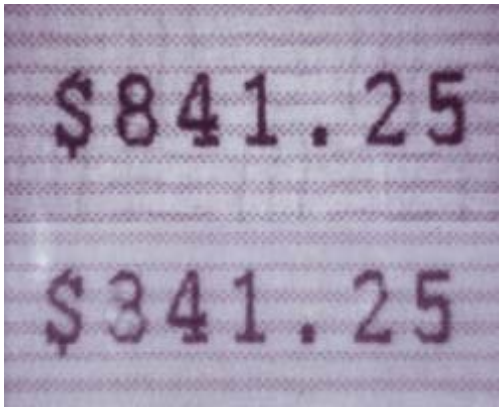
Services Provided

- Alterations and Obliterations to documents
- Non destructive Ink Examinations
- Impressions/Printing processes (e.g., typewriters, check writers, rubber stamps and seals and other duplicating processes like photocopy machines)
- Indented Impressions
- Deciphering water soaked, charred, or burned documents
- Physical Match examinations
- Counterfeit Examinations
- Footwear and tire impression comparisons

Questioned document Examinations

Forensic document examiners make use of an array of techniques; using state of the art equipment like the Video Spectral Comparator (VSC) to conduct a variety of examinations on items of evidence. The VSC is used primarily by the forensic document examiners to examine documents for alterations, forgeries and counterfeit items. It is capable of creating a variety of lighting conditions, making it possible for the examiners to identify features necessary for accurate results. The system also contains an integrated spectrometer utilized

for non destructive ink analysis to determine if different writing instruments were used on various documents



Alterations and Obliterations to documents

Forensic document examiners examine various types of documents through infrared, ultra violet and spectroscopic analysis in order to determine whether a document has been altered in any way or not. Alterations can include additions to or erasures and obliterations of existing writing. Examinations can include deciphering the original or altered entries.

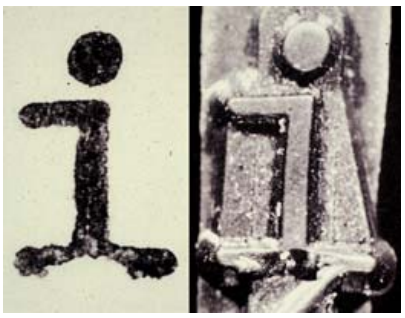
Non destructive Ink Examinations

Examiners conduct nondestructive optical examination of inks in order to:

- Determine whether an ink is similar as that on other parts of the same document or on other documents
- Determine whether two writings with similar ink could have a common origin, that is, the same writing instrument or ink well
- Determine whether a specific writing could have been produced with ink from a specific writing instrument or ink well.

Impressions/Printing processes

Mechanical impressions are impressions placed on a piece of paper by a machine or simple tool (e.g., typewriters, check writers, rubber stamps and seals). It is often possible to identify the impression left on a document as produced by one particular machine or tool. It is also possible to determine whether two documents have a common source, typewriter make and model determinations and identification of photocopy machines. Whenever possible the original typewriter, check writer, notary seal or rubber stamp should be submitted to the laboratory.



Indented Impressions

Deciphering indented writing on anonymous letters and other documents.

The text of indentations may be deciphered, and it can be determined whether a certain document was written while in contact with a certain pad, notebook, paper, etc.

Note that this process will not hamper any future fingerprint processing. However, latent fingerprint processing will hamper efforts to raise indented handwriting impressions. Indented writing examinations is therefore usually conducted before fingerprint processing

Deciphering water soaked, charred, or burned documents

Deciphering water soaked, charred, or burned documents in order to determine the content of writing or printing that occurred on the documents prior to damage

Physical Match examinations

The section performs physical match examinations of paper only. This includes cuts, tears and perforations. The purpose of this type of analysis is to determine whether or not two or more paper fragments were at one time joined or whether a piece of paper originated from a specific pad.

Counterfeit Examinations

This includes examinations to determine if submitted documents or currency is counterfeit or genuine. Official documents, such as currency, driver's licenses and negotiable instruments are many times targets for

counterfeiters or are attractive documents for alterations. Therefore, it is important for the Forensic Document Examiner (FDE) to have knowledge of security features and/or printing processes that are used to protect and identify authentic official documents. The particular methods used in a given case will depend upon the nature and sufficiency of the material available for examination.

Evidence Submissions

All documents should be handled as little as possible and must not be folded, creased, or stapled after collection.

Whenever possible, documents should not be processed for latent prints prior to submission for document examination. If requested, documents will be preserved for any future latent processing.

Never complete paperwork or fill in evidence bags or envelopes with the documents being submitted for analysis underneath or enclosed. This may result in indented writing being transferred onto the evidence inside the bag.

Extreme care must be exercised in handling burned or charred documents. They should always be hand-delivered to the laboratory.

The laboratory system no longer accepts misdemeanor bad check cases.

Whenever possible, always submit the suspect typewriter; check writer, rubber stamps, or seals rather than samples. Typewriter ribbons may contain the text from the questioned documents. Whenever practical, always submit the ribbon with the suspect machine. Never type on the typewriter to obtain exemplars.

Obtaining Standards in Mechanical Impression Cases:

Typewriters

Due to the complex nature of this type of examination, it is strongly recommended to contact the laboratory when this type of examination is required and obtain information on the required exemplars based on the specific situation.

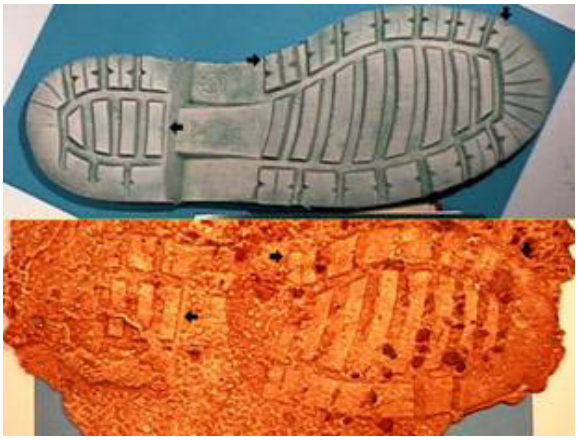
Check Writers

Impressions should be obtained in all the questioned denominations, including company logo. At least three repetitions are needed for each check. If possible, submit the actual check writer to the lab rather than take exemplars.

Copy Machines

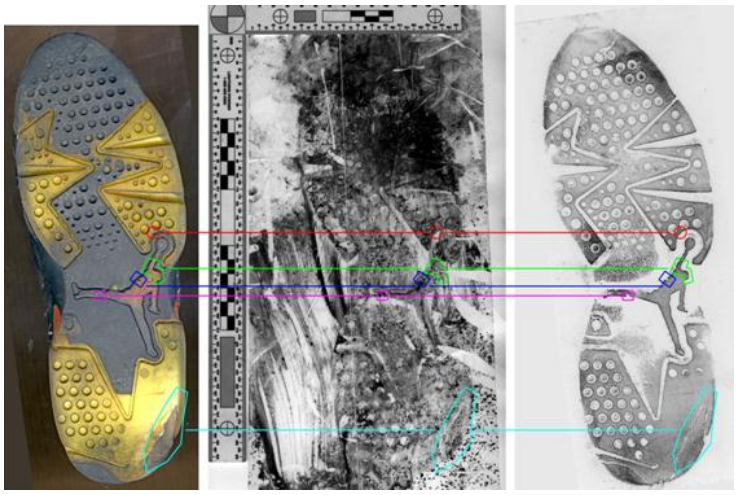
It is often possible to determine the type of process used to make a copy, and whether or not a specific copy machine was used to produce a questioned document. The proper method used to obtain a sample from a suspected copier is to activate the machine without a document in place to be copied with the lid down. The paper will be blank, but defects from the lid and glass will be recorded on the copy produced. A minimum of six copies should be prepared. The same number of additional samples should be obtained with a piece of paper on the platen (glass.) The make/model serial number and location of the copier should be noted. Do not write on the front of the samples. Each group should be separated and marked inconsequently on the reverse with its number sequence of reproduction.

Footwear and Tire Impression Evidence



Persons committing a crime may leave footwear or tire impressions entering and/or exiting the crime scene. Examinations of questioned impressions on crime scenes may provide investigative lead information such as brand and model of tires and footwear. Possible vehicle makes and models may also be determined from wheel base and track width measurements. In many instances, impressions can be positively identified as having been made by a specific shoe or tire.

Impressions at the scene can be photographed or physically lifted with various methods to include electro static dust lifting, gelatin lifters and casts.



An analyst examines the cast, photograph or lift of an impression left at the scene and compares it with a suspected shoe or tire to determine whether the questioned impression originated from the known shoe/tire.

The comparison includes determining if they share any class characteristics or if any accidental characteristics are present on both.

Class characteristics are those present in multiple items of the same type (For example similar tread design, size and/or wear characteristics).

Individual/accidental characteristics are those unique to a single item and allow a positive identification of that item. (For example, a shoe with gouges in the rubber on the bottom due to rough use will transfer that shape to surfaces that are walked on). Usually these characteristics are unique and matching them to the shoe will result in a positive match (meaning only that shoe could have left the impression).

Investigative lead information regarding the manufacturer and model of footwear or a tire can be determined from the design in the impression left at the crime scene. Reference collections and databases are used to develop this type of information.

Collection of Footwear/Tire Impression Evidence

Once detected, impression evidence should be photographed and collected as described below. *Always photograph first then cast or lift. Do not substitute one for the other.*

Examination quality images must be taken using a tripod. The camera must be directly above the impression, not at an angle.

A scale must be included in these photographs so that an actual-size enlargement can be made. Bi-directional scales (L shaped) are recommended to ensure enlarged images are not angled in either north-south or east-west directions. Use of scales which have a circle with a cross-hair printed on them may allow for correction of angle distortions in some cases.

Ensure that the scale is at the same plane as the bottom of the impression.

Tire impressions should be photographed through an entire rotation if possible using sequential shots which slightly overlap. A typical full tire rotation may be six feet long on the ground.

Always submit the digital image file. This will enable the lab to produce actual size enlargements for comparative examinations.

If the impression evidence can be removed from the scene, protect the impression from possible damage before submitting it to the laboratory.

If the impression is two-dimensional and cannot be removed from the scene, photograph the impression first then lift or enhance as necessary.

Impressions in blood can be chemically enhanced using several methods.

Impressions in dust can be lifted using an electrostatic lifting device and/or gel lifts.

Impressions detected using fingerprint powders should be gel lifted (use contrasting gel lifters i.e. white gel lift for black powdered impressions).

*Do not cover an impression with tape***.** This may obscure impression detail and make enhancement impossible.

Gel and static lifts need to be protected from damage during transit. Taping the corners of the lift inside a new pizza box is recommended. Transport the box without tipping. Covering gel lifts with the original plastic protective sheet may leave distortions in the gel which may obscure detail in the impression.

If the impression is three-dimensional (in sand, soil, or snow), cast the impression with Hydro cal or Dental Stone following photography. Do not attempt to wash a cast or remove attached soil. Allow the cast to dry several days before transport. Submit the cast to the laboratory secured in a box to prevent breakage.