



Questioned Documents Section - 2014

J19 A Crosscut Shredded Document Case Made Easier: Part II — Predicting Where the Debit Card Pieces Go

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After attending this presentation, attendees will learn techniques that can facilitate the manual re-assembly of shredded debit, credit, or other rigid plastic cards.

This presentation will impact the forensic science community by proposing a methodology to make the process of manual re-assembly of shredded debit, credit, or other rigid plastic cards easier.

At the 2013 American Academy of Forensic Sciences meeting, a case involving a small bag of crosscut shredded paper documents was described. The case request was to reassemble them in the hopes of providing evidence in a case of identity theft and the filing of false tax returns. Little could be found in the literature outlining procedures for reassembling shredded documents, but a methodology was eventually developed. One of the advantages of the methodology was the possibility of predicting the precise pattern into which a document was shredded.

The methodology includes, in part, the following steps:

- Sorting paper shreds by color and type of paper, and by markings present.
- Making measurements or comparisons of the width and length of the shredded pieces, and the angles formed by the machine-cut edges and the shredded edges.
- Orienting the pieces in the direction the document was shredded.
- Creating a template for assembly and a grid for aligning the shreds.
- Creating a grid of the pattern of the shred over the entire document.

Another shredded document case was subsequently received, this time involving reloadable debit cards. The cards were believed to have once been loaded with refunds obtained illegally through the filing of false tax returns, and the signature blocks on the back were assumed to bear the names of the return "filers," many of whose identities had been stolen.

The physical differences encountered between plastic shred and paper shred required some modifications in the methodology used for reassembling paper documents. Some of the steps modified involved how to:

- Prepare the shreds for handling.
- Straighten bent fragments.
- Estimate how many total cards were present.
- Affix the cards to a suitable medium for reassembling.

It also proved to be more a challenging process to:

- Align the pieces of the card being assembled.
 - Predict the pattern into which each card was shredded.
 - Despite the challenges, through the use of this revised methodology, parts of 45 cards were able to be assembled, providing the submitter with additional names and numbers important to the investigation.
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Shredded Documents, Document Reconstruction, Plastic Card