J6 Decoding the United States Postal Service Barcodes

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The goal of this presentation is to inform the forensic community about the information contained in USPS barcodes and how to decode them.

This presentation will impact the forensic community by highlighting an area of specialized technology.

After viewing the presentation, attendees will understand the information which can be gained from barcodes found on mail delivered via the United States Postal Service (USPS). Barcodes are used by USPS for a variety of reasons and contain information including zip code of addressee, sender, rate information and time stamping. Depending on the type of case and the mailed item, decoding barcodes on the package could provide investigation leads. The presentation will highlight a threatening letter case involving the reuse of an envelope. The case required the separation and decoding of overlaid POSTNET (Postal Numeric Encoding Technique) barcodes. The POSTNET barcode can be 32, 52, or 62 bars in length depending on the information included. POSTNET barcode is read in groups of five bars containing two tall and three short bars (additional bars are frame bars). POSTNET barcode always includes the five digit zip-code of the recipient. Longer POSTNET barcodes include additional recipient address information. The bars are tall and half bars which represent numerals. Decoding of the POSTNET barcodes in this case provided the zip code of the original recipient of the envelope. The envelope also contained MLOCR (multi line optical character reader) information. MLOCR is comprised of seven alpha and numerical characters which serve to identify companies authorized to preprint barcodes and provide rate information. Decoding the MLOCR in this case provided information on the company which mailed the envelope to the original recipient. While the decoding of barcodes cannot specifically identify an individual it can assist in narrowing a field of suspects, disproving a story, establishing a geographical area or other helpful information to piece a case together.

In addition to the discussion of POSTNET and MLOCR barcodes, other USPS barcodes will be discussed including: PLANET, intelligent and applied identification tag (ID tag). Discussion will include description of barcode and information contained as well as different tools which aid in decoding the barcodes. The PLANET barcode has two forms origin confirm and destination confirm. This barcode is used to assist tracking of mail and con- firm delivery. The PLANET barcode contains customer information, mail piece type, and mailer information. In appearance, PLANET barcode is similar to POSTNET. However, PLANET is read in groups of five contain- ing three tall and two short bars and is 62 or 72 bars long. The intelligent barcode is a relatively new barcode and is based on algorithms allowing for more information with fewer bars. The intelligent barcode combines PLANET and POSTNET barcodes into one which is 65 bars long. The bars are a combination of full bars, ascenders and descenders (half bars), and trackers (quarter bars). The intelligent barcode is printed by authorized companies and includes company identifiers, recipient zip-code information and confirmation information. Decoding this barcode is achieved using an online decoder. The ID tag is the fluorescent orange barcode often located on the reverse of envelopes. The ID tag contains information on the machine which processed the piece of mail including date and time. Due to the large volume of mail processed by USPS this barcode is most useful within 14 days of being applied. USPS barcodes contain information regarding sender, recipient, and other information which potentially could aid an investigation. This presentation places emphasis on the potential importance of decoding barcodes to forensic investigations along with instructions on how the different barcodes are deciphered.

POSTNET, MLOCR, ID Tag

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