

# Abstracts

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## **Secondary Impressions** (Andrew J. Barton and John D. S. Walker)

This paper provides a summary of available information relating to secondary impressions and additional findings gained through experimentation done in the New Zealand Police Document Examination Section. The culmination of this information is aimed at providing a reference to identifying the types of conditions that lend themselves to the formation of secondary impressions and, furthermore, to note any features that distinguish these secondary impressions from indentations.

## **Applying Specific Digital Enhancement Techniques to ESDA-Developed Impressions**

(Grant R. Sperry and Diane K. Tolliver)

The ESDA (Electrostatic Detection Apparatus), IMEDD (Indentation Materializer Electrostatic Document Device) and other instruments and techniques are employed routinely by Forensic Document Examiners (FDEs) in an effort to locate, decipher and preserve indented writings or impressions. The impressions developed on the polymer film sheet using the ESDA or IMEDD, regardless of technique, will frequently be less than optimum and defy successful decipherment and/or poor legibility. A study was conducted to determine whether the use of specific digital enhancement techniques significantly improved the legibility and decipherment of impressions developed by the ESDA on polymer film. The results of this study will be presented as well as the specific techniques that were utilized.

## **Evaluation of Ozone Exposure from Use of the Electrostatic Detection Apparatus** (Mark Cameron)

Use of the Electrostatic Detection Apparatus in evaluating documents for hidden indentations creates ozone. Ozone can cause respiratory irritation and breathing difficulty. Ozone discharge was measured for an hour during continuous operation at two different locations. Results indicated that continuous use can generate ozone concentrations that will exceed the permissible exposure limit mandated by the Occupational Safety and Health Administration. Ozone levels can be controlled by shutting the corona wand off when not in use and by using local exhaust ventilation.

## **Manufacture of Pirated Compact Discs in Hong Kong**

(Yau-Sang Cheng, Chi-Keung Li, Pui-Shing Hung)

Compact discs (CDs) have gained popularity as a recording medium since the early 1980s. Owing to the low production cost and high profit margins, the medium has been a target for pirating by the clandestine "industry." This paper briefly describes the manufacturing process of a compact disc, and the identification methods used to relate a pirated CD with the stampers, mold heads and printing screens found in the clandestine CD factory. Characteristic defects introduced during the various stages of the production process, namely, the molding, design and printing, all offer excellent potential for comparative examination.

## **Printing Defects on Three-Ring Notebook Paper** (Richard A. Horton)

This paper addresses the significance of printing defects in the margin lines and horizontal lines of typical notebook paper. A brief overview of notebook paper printing and assembly is provided. Two cases involving defects on sheets of notebook paper are discussed.