



## Questioned Documents Section – 2011

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### J3 Printer Problems Defined by Industry Experts

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The goal of this research is to compile information concerning individual characteristics on documents from the printing process and defined defects in printers. With this information, a forensic document examiner may know the cause of characteristics they observe on a document and may use such characteristics to assist in identifying or eliminating a source printer.

Knowledgeable resources such as industry repair and sales personnel can provide valuable information related to observed characteristics in common document examination problems. This presentation will impact the forensic science community by assisting in the accumulation of greater knowledge from industry repair experts who can assist to make more reliable determinations in forensic document cases.

To the trained observer, recognition of features in a printed document yields an array of information. A trained observer may be the person who repairs the machine that document evidence is printed on. The repairman's knowledge of printer technology and the possible cause of characteristics or defects observed assist the forensic document examiner to glean greater and more accurate information in cases involving documents printed via personal printing devices. This information can include manufacturing considerations versus characteristics caused by individual usage and may assist the examiner recognize the limitations of statements of individuality.

Through a series of interviews with printer repairmen around Minneapolis, a list of technology imperfections and defects of laser printers that cause or contribute to printing problems has been compiled. Each technician interviewed has experience in the field that allows them to describe in detail the technology imperfections, describe how the determination of the problem is made, and what a repair may mean to the individuality of future printed documents on the repaired machine. These imperfections are manifested in unique ways by the technology and may become unique and identifiable to that printer. This resource information can assist the forensic document examiner in a greater understanding of printer technology and the value of various characteristics found in a printed document.

#### **Printers, Defects, Repairmen**