J15 Inkjet or Offset? Proceed With Caution

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After attending this presentation, forensic document examiners will be made aware that single, solid-color inkjet printing is available and be able to view available images and/or samples.

This presentation will impact the forensic community and/or humanity by making many forensic document examiners aware that single, solid-color inkjet printing is available and to consider this fact when examining solid, single-color printing.

The forensic document community has exercised skill and knowledge in determining whether documents are prepared using an inkjet or offset printing process for years. However, newer and better printing technology makes this task more challenging. Traditionally, inkjet printers have combined cyan, yellow, and magenta as the only means to produce other colors. Due to this fact, it was commonplace to discount the idea that an inkjet printer could produce solid, single-color images. These flat or even surface images were typically produced by an offset or even flexographic (which exhibits very little, if any, embossing) printing process. Now, in this day of advanced printing technology, forensic document examiners need to be aware that inkjet printers can produce solid, single colors.

Hewlett-Packard Company, Specialty Printing Systems, is one company, among possibly others, that has developed single-color thermal inkjet print cartridges that use fast-drying, water resistant ink available in black, red, green, and blue. With this new single-color print cartridge, wasted ink will be a thing of the past. Right now this licensed technology is only made available to companies that qualify.

How will this affect the forensic document examiner who has to make the determination as to the printing process on a document? Some of the characteristics observed when examining samples of the single-color inkjet were jagged edges, some overspray, linear non-inked areas indicating some nozzles were not releasing ink, and brightly colored ink which was really absorbed into the paper.

The characteristics forensic document examiners would expect to see with offset printing are vibrant ink colors, smooth edges, no overspray, and ink absorbed into the paper. However, if the image that is used for offset printing is poor in nature or of a digital or inkjet process, could this exhibit other characteristics than those traditionally observed in offset printing? Hence, there is a need for extreme caution when making these determinations regarding flat, single-color images.

Offset Printing, Inkjet Printing, Solid Color Processes

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