Task Number: 2017-01

Article Title: Fingerprints: Beyond the Source

Date Published: February 18, 2016

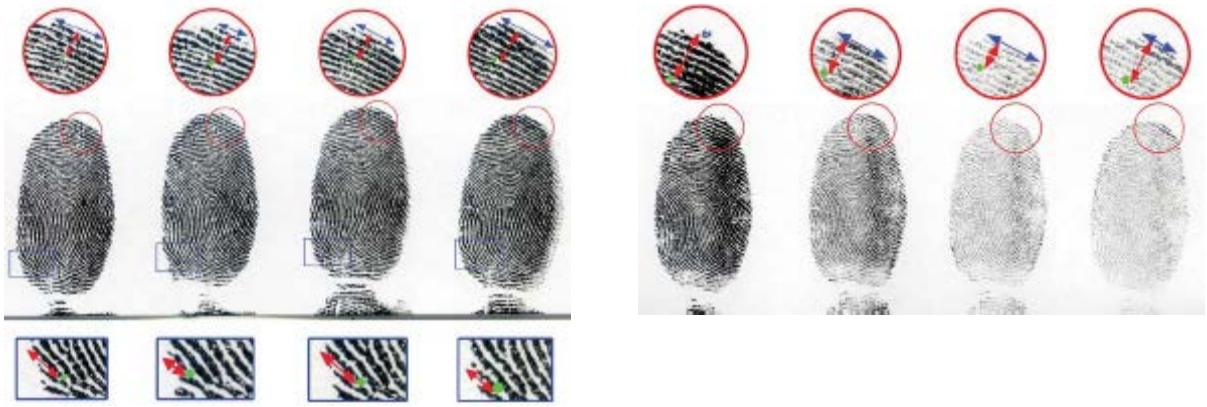
Author(s): Carlos Magno A. Girelli

Article's Subject Matter

- **Digitally forging fingerprint images in documents**
- **How to detect identical fingerprint images**

Key Points in Article

- **Fingerprints collected on different occasions should be able to compare to an identification, but they should not be identical prints.**
- **Determine forgery through fingerprint contour, colour, brightness, contrast of different parts of the fingerprint, distance between ridges, distortion, and the presence of artifacts.**
- **Forgers could alter fingerprints digitally, however this is determined to be unlikely as a result of the exhaustive process to do this properly.**
- **Examples of features which should change between impressions from the same print are shown below. The four prints on the left were created by inking the finger after each touch. The four prints on the right were successive touches without inking again.**



- **The images illustrate that it would be difficult to create identical fingerprint impressions on different touches. This suggests that if two prints are identical they are probably copies of the exact same impression.**

Fallacies and or Issues

- **While the paper does show how fingerprints can differ between multiple touches, it does not provide a thorough experiment. More touches from a variety of fingerprints may provide better evidence of the concept. Also, a test of examiner abilities after an image has been digitally doctored may be useful.**