

Letter to the editor

Re: Ghosting of Images in Barefoot Exemplar Prints Collection: Issues for Analyses. *J. For. Ident.* **2015**, 65 (5).

I would like to congratulate the author, J. Gordon Burrow, for his research considering an important area in bare footprint evidence evaluation. However, I would like to clarify some of the findings of my own work in relation to the following statement made on page 898: “The presence of ghosting may also result in questions regarding the repeatability of the measurement system, therefore questioning the validity and reliability of the system used. The measurement will depend on the accuracy and repeatability of the point at which the furthest margin (or pixel point if using a digital imaging software package) is used to determine measurements.”

The currently accepted linear measurement method considered in my research should be seen as separate from Mr. Burrow’s findings relating to intra-variation of ghosting. For comparisons in casework, it is important to understand that ghosting is not a stable feature and the dimensions of ghosting can vary. However, the accepted method to measure footprints is valid. In my published article “Reliability of a two-dimensional footprint measurement approach” (Reel et al., *Science & Justice*, **2010**, 50 (3), 113–118), both intra-rater and inter-rater reliability (repeatability) of the measurement method were found to be statistically significant for both static and dynamic footprints (including ghosting) for three repeated footprints of 61 subjects. The testing for reliability of the measurement method in Reel et al.’s research was robust, using three separate accepted reliability tests (Bland and Altman’s Limits of Agreement, Intraclass Correlation Coefficients, and Standard Error of Measurement). Intra-rater and inter-rater measurement reliability was scrutinized for various linear measurements defined by anatomical landmarks of the footprints, including from the heel print to the furthest margins of the toe prints.

Mr. Burrow’s research succinctly demonstrates the variability of the presence of ghosting, but this should not be interpreted as casting doubt on the reliability and validity of the linear measurement system used in bare footprint comparison.

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