

Determination and Handling of Dactyloscopic Marks



Contents:

- 1. Introduction
- 2. Basics
- 3. Fingers + Thumbs
- 4. Palm Forms
- 5. White Lines
- 6. White/Black Areas:
- 7. Directions of Flow
- 8. Patterns
- 9. Deltas
- 10. AFIS

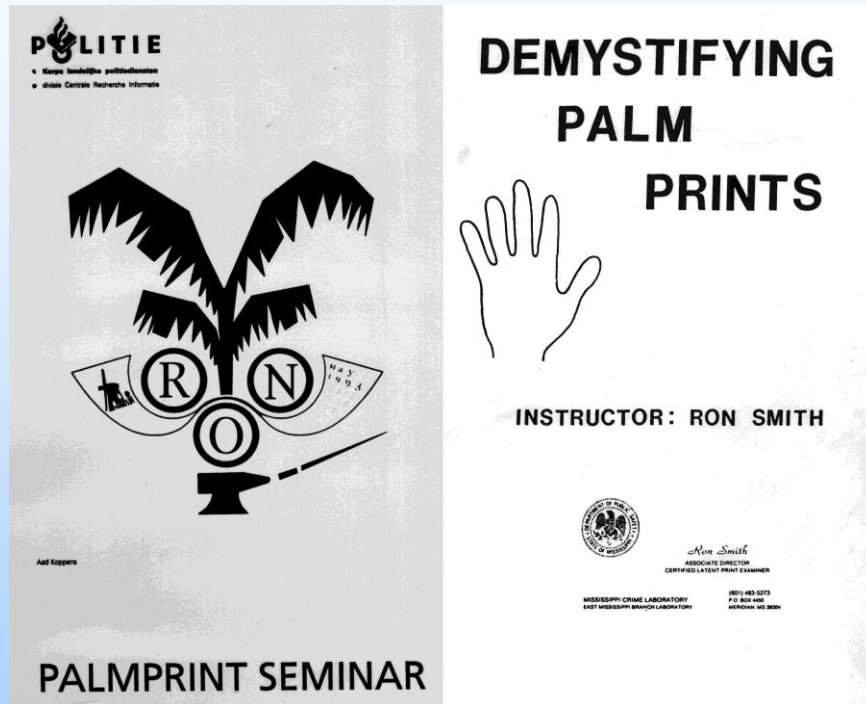
1. Introduction

- Hands up, what fingerprint examiner has never come across a friction ridge mark whose position in the friction ridge skin he is unable to determine beyond doubt when analysing evidential material?
- Does the mark stem from a finger or thumb joint, a palm, or even the sole of a foot or a toe?

- This introduction is meant to help fingerprint examiners determine both the ridge skin area which caused the print pattern and the direction from which same was laid down.
- Thus, the time required for searching and comparing prints can be reduced while the probability of finding matches increases.

- Can an image and/or colour reversal of the ridge skin impression be ruled out?
- Is the print in its correct position, i. e. looked at in the direction from which it was caused?
- If these questions cannot be answered, it can be difficult and time-consuming for fingerprint examiners to compare or search prints, not only manually, but also in the AFIS.

- This presentation is based not only on knowledge gained from personal experience in over twenty years of dactyloscopic work, but also on the experience of other experts working in this field, who have shared their knowledge with the author.
- I would thus like to extend a special thanks to the following colleagues:



- the organisers of the CRI at the Netherlands Police who carried out a palm print seminar in May 1993,
- Mr Ron Smith from the Mississippi Crime Laboratory, USA, who was the instructor at that seminar,



- Steffi Tietze and Klaus Witthuhn from the forensic institute at the State Criminal Police Office (LKA) in Saxony, where the author had the honour of receiving on-the-job trainings in 1997 and 1998, and who published a CD in 1999 and a book in 2001,

- Mr Peter Lohmüller from the Police Headquarters in Recklinghausen, who provided substantial assistance in preparing this presentation.
- Many thanks also to all those who, by providing help, advice, examples, support, translation and copies, have made it possible to release this presentation.

Harald Weisel, Fingerprint Expert