

Standard for Feature Selection in Friction Ridge Examination



WHAT IS AN AAFS STANDARD FACTSHEET?

The AAFS produces clear, concise, and easy-to-understand factsheets to summarize the contents of technical and professional forensic science standards on the OSAC Registry. They are not intended to provide an interpretation for any portion of a proposed standard.

WHAT IS THE PURPOSE OF THIS PROPOSED STANDARD?

This standard provides friction ridge examiners with a comprehensive list of features and their definitions, as well as guidance regarding factors affecting the distortion and diagnosticity of those features.

The features expand on those provided by [ANSI/NIST-ITL 1-2011 \(Update:2015\)](#), a standard focused on the format of data for the exchange of biometric information.

Examination methodology and documentation are not addressed.

WHY IS THIS PROPOSED STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

A friction ridge examiner is responsible for observing and interpreting data, making decisions, forming opinions, issuing reports, and providing testimony. This standard requires a unified approach to selecting features in friction ridges, which can enhance the quality and consistency of examinations.

Greater consistency in feature selection will positively impact subsequent comparisons to determine if the questioned print and exemplar prints were made by different sources or if they were likely made by the same donor but are displaying variations in appearance.

This OSAC Proposed Standard has been sent to the [AAFS Academy Standards Board \(ASB\)](#) for further development and publication. Get involved as a member or by providing public comment.

HOW IS THIS PROPOSED STANDARD USED, AND WHAT ARE THE KEY ELEMENTS?

This standard is used by examiners when evaluating and comparing friction ridge prints. Examiners are instructed to only use the features and their associated attributes listed in this standard during friction ridge examinations to support suitability determinations and source associations. The features and associated attributes listed include:

- Ridges
- Minutiae
- Incipient ridges
- Dissociated ridges
- Ridge flow
- Pattern elements – recurves and triradii
- Regular creases
- Irregular creases
- Wrinkles
- Scars
- Unstable features
- Impression shape

Consideration of a feature's diagnosticity is recommended when conducting friction ridge examinations. This standard includes information on diagnosticity for the above features. In addition to the significance of each feature, this standard provides examples of the relationship among features. Examiners are advised to consider factors that may affect a feature's appearance – e.g., aging, injury, digit abduction, surface conditions, and processing techniques. Images depicting the features that are required to be used are included in the appendices of this standard.

