FACTSHEET FOR ANSI/ASTM STANDARD GUIDE E3149-18

Facial Image Comparison Feature List for Morphological Analysis

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 published standard.

WHAT IS THE PURPOSE OF THIS STANDARD?

This standard guide describes features and characteristics that should be considered during a morphological facial comparison. These comparisons can be performed between images, or between an image and an individual who may appear in front of a practitioner. The features and characteristics described can be used to evaluate similarities and dissimilarities.

The standard guide includes the main facial features (e.g., eyes, ears, nose, mouth). It also describes details of the characteristics of the features (e.g., lobe of the ear, nostrils of the nose). It further lists the characteristic descriptors that describe what should be evaluated when comparing the facial features and the characteristics of the features (e.g., symmetry of the lips, shape of the jawline).

WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

This guide is important because it provides a standardized approach for comparing the dimensions and proportions of the human face.

Adherence to the standard ensures that all examiners that perform a morphological facial analysis are comparing the same features, and also using the same terminology to describe the features.

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

This standard is the primary approach used in the analysis and comparison process of facial image(s) or a facial image and a person who appears in front of a practitioner. It is utilized in varying degrees within all levels of facial comparisons (assessor, reviewer, and examiner). Each time a comparison is conducted, the practitioner evaluates the features of the face to determine whether the features are similar or dissimilar.

The key elements of the standard are the list of facial components, component characteristics, and the characteristic descriptors. This multi-level list of features helps the practitioner to conduct a step-by-step comparison of each feature with the degree of scrutiny that is appropriate to the type of comparison (*e.g.*, assessment, review, or examination) being conducted. Additionally, the morphological analysis is highly dependent on the quality and quantity of the facial features and characteristics available in the image, which in turn is dependent on the quality of the image itself.

During an *assessment* (e.g., traffic stop or border patrol passport check) there may not be sufficient time to conduct a full morphological analysis. Time constraints are often a limiting factor. During the *review*, there is generally more time to conduct a full morphological analysis. An *examination*, particularly in a forensic application, should involve a comprehensive morphological analysis.