

Standard Guide for Scanning Facial Images for Manual Comparison



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 guide provides recommendations for scanning printed facial images for enrollment in facial recognition (FR) systems or for facial image comparisons.

This guide does not provide information on original image capture, printing resolution, or image enhancements that may have occurred before a facial image was printed or during the preparation of a facial image for identity documents.

The guide raises awareness of the potential need to consult an image specialist for advice on the best method of scanning a facial image in a document that may have other impacting features, such as halftone or similar processes used in mass-produced documents (e.g., magazines, newspapers).

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

Printed images (e.g., identity documents, like passports) often become the subject of manual comparisons or are enrolled in an FR system. In order to manually compare or enroll in an FR system, printed images must be scanned.

Scanner color calibration and resolution settings impact the scan output. If performed incorrectly, they may adversely affect the image comparison or enrollment processes, such as creating significant artifacts, anomalies, false details, or cosmetic image restoration effects. The use of optimal scanner settings helps to prevent unnecessary image processing.

This OSAC Proposed Standard has been sent to ASTM International (ASTM) 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 forensic science practitioners to maximize the potential use of scanned facial images. The images must be true color representations of the printed source. The scanner used must be capable of producing images that exhibit good geometric fidelity, sharpness, and detail rendition with low noise characteristics. Flatbed scanners with no auto-feed tray are recommended to minimize the movement of the image being scanned.

This guide provides recommended minimum capabilities to include in scanner testing and notes that there are several important considerations uniquely associated with scanning facial images. It also provides specific testing recommendations for color image scanners and reflection scanning as well as instructions for scanner calibration.

Operational use is addressed with recommended minimum scanner settings for images that will be uploaded into facial recognition systems or analyzed during a manual facial image comparison. The guide provides references for image processing performed after scanning.



Image: Courtesy of FISWG® Standard Guide for Scanning Facial Images,™ Version 1.0