IBIA FACIAL RECOGNITION USE CASES

The International Biometrics + Identity Association is a strong advocate for ethical uses of technology, particularly related to identity technology. Different identity use cases require different rules, and the associated rules can and should go beyond considerations of the underlying technology. To craft the kind of use-case-specific, risk-based rules for which IBIA advocates, however, understanding different identity technology functional applications and the use cases incorporating those functional applications is essential. In this document, we define two different facial recognition functional applications and provide a few example use cases for each functional application.

Verification

Verification is the direct comparison of a person's captured facial image (often called a "probe image") to a previously collected and stored (often called "enrolled") facial image of a specific individual, in order to determine whether or not the two facial images are of the same person. In addition to performing other functions, facial verification technologies can help facilitate:

- Logging in to an app or a phone or computer;
- Contactless access control for an office or worksite, a trusted traveler lane, an event venue, or other area;
- Assessing the validity of travel documents at a border port of entry or exit or airport security; and,
- Cashless financial transactions.

This technique is known as a one-to-one comparison because the comparison is performed between the probe facial image and only one specific individual's enrolled facial image.

Identification

Identification is the comparison of a person's probe facial image to a gallery of previously enrolled facial images to see if the probe image depicts one of the individuals in the gallery. In addition to performing other functions, facial identification technologies can help facilitate:

- Opt-in face tagging in images in social media;
- De-duplication of identity credentials like driver's licenses;
- Searching mugshot databases to help identify criminal suspects;
- Identifying deceased individuals, unconscious patients, and human trafficking victims;
- Forensic examination of video surveillance after a crime; and
- Real-time area surveillance with face recognition to stop an ongoing crime or prevent a terrorist attack.

This technique is known as a one-to-many comparison because it compares the probe facial image to the whole gallery of enrolled facial images. If the probe image is similar enough to a gallery image to cross the threshold for constituting a match, the facial recognition technology will indicate the match, which may help the user identify the candidate individual in the probe image. If there is no match, the candidate remains unidentified. Identification can only be performed if the system already has the candidate's facial image in the gallery.

IBIA is dedicated to the ethical use of biometrics and welcomes opportunities to participate in multi-stakeholder dialogues and to serve as a resource to policymakers and media outlets interested in discussing and working to address these important topics.