



INTERPOL

FACT SHEET

Fingerprints

Fingerprint evidence can play a crucial role in criminal investigations as it can confirm or disprove person's identity.

► AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM

Our Automated Biometric Identification System (AFIS) enables our member countries to share and compare fingerprints to identify any persons of interest. Launched in 2000, AFIS enabled countries to identify thousands of individuals, often in cases where false identities were used and biometrics were the only possibility to identify them.

In 2023, AFIS became part of our Automated Biometric Identification System (ABIS), together with our Facial Recognition System (IFRS). ABIS uses state of the art matching algorithms provided by Idemia, INTERPOL's Biometric partner.

Authorized users can submit search requests against AFIS using the Biometric Hub, launched in 2023.

► SCIENCE BEHIND FINGERPRINTS

Fingerprint identification is a form of biometrics, a science that uses people's physical or biological characteristics to identify them.

No two people have the same fingerprints, not even identical twins. Neither do fingerprints change, even as we get older, unless the deep or 'basal' layer is destroyed or intentionally changed by plastic surgery.

There are three main fingerprint patterns, called arches, loops and whorls. The shape, size, number, and arrangement of minor details, called minutiae, in these patterns make each fingerprint unique.

► MAKING A MATCH

When a fingerprint is found at a crime scene it is known as a 'finger mark' or 'latent print'. Cross-checking these against other prints in police databases has the potential to link a series of crimes together, or to place a suspect at the scene of a crime.

Authorized users in member countries can cross-check records from their national fingerprint databases against INTERPOL AFIS via the Biometric Hub, especially in cases where there might be an international aspect to the crime.

Fingerprints, which must be of sufficient quality, are searched in AFIS, a system that compares and analyzes dactyloscopic details and selects the candidates based on the score using powerful algorithm.

Countries can opt to submit their fingerprint searches in 'lights out' mode (identifications are done without the intervention of fingerprint examiner or in a 'confirmed' mode, where potential candidate decisions are reviewed by two INTERPOL Fingerprint experts.

All fingerprints of required quality submitted by member countries via I-LINK products (Notices, Diffusions and I-LINK Messages) are processed via the Biometric Hub and are searched and stored in AFIS.

Fingerprints

Member countries can submit “search only” requests directly to the AFIS using the Biometric Hub, for example, in cases important for an investigation or to cross-check the fingerprints of person of interest at a border crossing.

► EXCHANGING FINGERPRINT RECORDS USING THE NIST STANDARD

Fingerprints can be taken with an electronic scanning device or manually, using ink and paper. A scanner is then used to save the data electronically in the appropriate format. Records are saved and exchanged in the format set by the National Institute of Standards and Technology (NIST).

INTERPOL publishes a technical document with implementation guidelines for the exchange of biometric data in line with this format.

The latest version (v. 6.0), published in 2020, introduces the use of XML and will, in future, replace the current version (v5.03).

Both sets of guidelines and the related file package can be downloaded from our GitHub platform. Any feedback, questions or problems can be submitted via the Issues page.

To facilitate the transfer of fingerprint data, INTERPOL has made a tool available to member countries which converts JPEG files into NIST files (Image2NIST).

► IDENTIFYING VICTIMS OF DISASTERS

Along with DNA, fingerprints can play an important role in identifying victims following natural or manmade disasters such as an earthquake or bombing. This is important not only for the police investigating the incident, but also for the families concerned.

► GATHERING EXPERTS TOGETHER

Our International Fingerprint and Face Symposium provides an opportunity for experts from around the world to share best practice and latest developments.

In addition, two fingerprint related working groups are take place twice a year at INTERPOL:

- INTERPOL AFIS Expert Working Group shares the information on new technology, identification procedures and training needs.
- INTERPOL NIST Standard Implementation Working Group works on the latest INTERPOL NIST standard and its evolution.

► TRAINING

We provide training to law enforcement officers and experts in our member countries, to ensure that frontline officers have the knowledge and skills necessary to use the Biometric Hub and our related services. Training options include an online platform, in-person training on the use of mobile biometric devices prior to operations, know-how of transmitting the fingerprints to INTERPOL (for search only or search and storage) and the basics of fingerprint evidence collection at crimes scenes.



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► CONTACT INFORMATION:

Contact us via our web site. For matters relating to specific crime cases, please contact your local police or the INTERPOL National Central Bureau in your country.

► **Twitter:** @INTERPOL_HQ

► **YouTube:** INTERPOLHQ

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