



04: Biometrics

What is biometrics?

A biometric or biometric identifier is a measurable physical or behavioural characteristic of an individual which can be used to verify the identity of that individual. Commonly used biometrics include fingerprints, iris and retinal images, face recognition, hand geometry and voice recognition. For more information on biometrics, go to www.biometricsinstitute.org

How does face recognition work?

Face recognition maps various features on the face. For example, the distances between eyes, nose, mouth and ears. The measurements are digitally coded and can then be used for comparison and verification purposes. The Australian Customs and Border Protection Service (Customs and Border Protection) uses the digital photograph in the ePassport as the biometric identifier with face recognition technology to verify the identity of the ePassport holder.

Why did Customs and Border Protection select face recognition?

In developing SmartGate, Customs and Border Protection researched a range of biometrics. Customs and Border Protection also took into consideration the testing and research being undertaken by Passports Australia within the Department of Foreign Affairs and Trade.

Face recognition has the following advantages:

- It is less intrusive, easy to use and most broadly applicable to the general population.
- People are used to having their picture taken, particularly when applying for a passport or visa, or to get a driver's licence.
- The digital photograph in the ePassport provides a portable biometric identifier without the need for enrolment or registration.
- A Customs and Border Protection officer can undertake manual backup without needing to be a fingerprint or iris print recognition expert.
- A high degree of accuracy has been proven with this type of biometric.

How does SmartGate use face recognition?

SmartGate has been developed to work with an International Civil Aviation Organisation (ICAO) compliant ePassport. It uses the electronic information in the ePassport microchip and face recognition technology to verify that the holder of an ePassport is the owner of that passport.

Firstly, the kiosk retrieves the digital photograph from the ePassport microchip, creates a template mapping key underlying facial features and stores it in a database.

At the gate, SmartGate takes a photo of the traveller's face, converts it into another template, and compares this with the original template created at the kiosk. If the templates match, SmartGate can then confirm that the person carrying the ePassport is the same person whose details are held on the ePassport microchip.

Has face recognition been accepted internationally?

Yes. ICAO has issued a unanimous resolution endorsing the use of face recognition as the primary biometric for machine assisted identity confirmation with machine-readable travel documents.

Where can I get more information?

You can email smartgate@customs.gov.au or ring the Customs Information and Support Centre on 1300 363 263.

Please Note: All media enquiries should be directed to 02 6275 6793 (all hours) or email communication@customs.gov.au