INTERPOL Facial Images
Best Practices Guide

These recommendations apply to frontal face images for submission to INTERPOL

October 2015

In 2015 INTERPOL will introduce a facial recognition system to further enhance its forensics capabilities to its members countries. In this context the images used to populate the facial database as well as to submit for facial query be of a high quality in order to ensure consistent match performance.

The purpose of this document is to recommend a simple set up for taking frontal face (mugshot) images.

Different cameras will obviously produce different results but there are other important factors to take into consideration which can have a big impact on the effectiveness of facial recognition software.

COMPLIANT

The picture should show the face and shoulders with even lighting (No highlights or shadows), a full frontal centered image with a neutral expression. The background should be uniform.

FACTORS TO CONSIDER:

1- Subject Posing

It is important for the purpose of facial recognition that the person being photographed is looking directly at the camera with their full face and ears exposed and without any facial expression. Tilting or rotating of the head can cause inaccurate facial measurements that may result in recognition problems.

The subject's face shall be positioned in the image as illustrated by the following diagram:
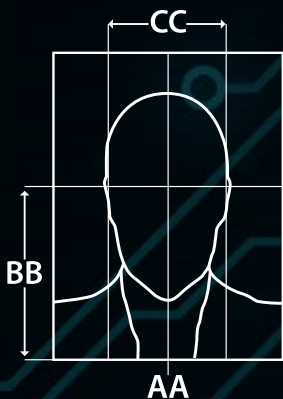
Head fully visible (CC), middle of mouth and bridge of nose centred vertically (AA), centre of eyes 50% up from bottom of image (BB).

The subject's face shall:
- Be in focus and stationary
- Be shown clearly in a full frontal profile
- Not be covered
- Not be tilted up, down, left or right
- Not be 'rolled' (i.e. tilted from a 90° angle)
- Include the subject's full head with hair, as well as neck and top of shoulders

The subject should not be wearing head covering(s).

The subject's eyes should be clearly visible and not obscured, meaning glasses should always be removed.

The subject's ears should also be clearly visible (hair pulled or tied back).

The subject must not be:
- Smiling/frowning
- Raising eyebrows
- Closing eyes
- Opening mouth
- Looking away from the camera

The subject should be at least 2m from the camera.

2- Lighting

Correct lighting of the subject will allow consistent looking images which will facilitate their use in automated face recognition. Lighting should be even and not cause bright highlights or dark shadows on the face.

3- Background

3.1 Background should be smooth and featureless

Either use a background of 18% grey or ensure that the exposure control is centred on the face only. Background should not be textured, include any shadows or contain any objects as facial recognition software could mistake these as facial features.

3.2 Face should be properly exposed

A white or very light background (without central auto exposure) will result in the facial image being underexposed and dark.

A black or very dark background (without central auto exposure) will result in the facial image being overexposed and washed out.

4- Image Resolution and format

- Image quality will be improved as the number of pixels in both directions is increased and will allow images of sufficient quality to be captured for the purposes of facial recognition by automated software.
- All images will be considered but the recommended distance between the centre of the eyes is 150 pixels (this will relate to an image approximately 800 pixels wide).
- This is achieved regardless of the type of digital picture camera used as long as the head width is at least 2/3 of the image width.
- Use of webcam is not advised, because of the limited resolution and image quality of most webcams.
- Image can be in 8 bit greyscale or 24 bit colour.

5- Image preparation for transmission

- The preferred file format is jpeg with high quality and with low compression.
- Resizing should respect the original aspect ratio and be non-distorting.