

# Golden Rules for PhotoVerify™

**PhotoVerify** is a BioID Web Service (BWS) specifically designed for identity proofing. It uses the photo image cropped from an ID document and compares it to two images captured live from a person, to find out whether the images belong to the same person. This service, however, does not perform any ID document

authenticity check nor validity check against any databases. It is a purely anonymous service for verification of ownership that requires no ID document data (e.g. passport number, name etc.). Furthermore, all images submitted will be deleted leaving no traces behind after the service is completed.

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**#1:**

## Two things one should know about before using the PhotoVerify service

**The Photo ID:** A photo ID is an ID document issued by some authority with the necessary security features to ensure authenticity. Such an ID typically accepts a high-quality photo with a certain standard. It is usually taken by a professional photographer or using a photo booth that is made specifically to take photos for such an ID document. For example, the photo on an electronic passport must be compliant with the ICAO guidelines. In principle, an ID photo is a frontal image of good quality taken under good lighting conditions, sometimes with camera settings to give a granular precision down to several pixels. This photo is printed on the front of the ID document. Some ID documents can additionally store a digital copy of the photo (“thumbnail image”) on the chip embedded in the ID document, e.g. an electronic passport.

**#2:**

**The Image Capture:** The best way to provide an ID photo is to retrieve the thumbnail image directly from the chip using a reader, provided both are available. However, it is very common to ask the user to scan his photo ID using a scanner or to take a snapshot using a camera. The live images can be captured simply using a webcam or a smartphone camera.

A photo ID is usually valid for several years. An identity proofing against such an ID is sometimes carried out as needed years after it has been issued. The scanning of the ID photo will inadvertently result in some quality issues due to the handling of the scanning as well as the possible obscuration presented by the security features (e.g. holographic image etc.). Furthermore, it is unlikely that the image capture can be performed under the same lighting conditions as that when the ID photo was originally created. Consequently, the recognition rate of an ID photo verification, whether performed by a person manually or by some software automatically, will be highly dependent on the quality of the captured images as well as the age of the photo ID.

To support various types of ID documents and applications, PhotoVerify offers five accuracy settings defined from 1 to 5 with a false positive rate (FAR) set at 10%, 5%, 2.5%, 1%, and 0.1% respectively. Depending on the application and its desired recognition rate, each ID document is usually associated with one accuracy level. The highest level, i.e. 5, is used typically when a digital photo image is available for use. A false negative result in a PhotoVerify operation is typically due to inconsistent lighting conditions or when proofing against an ID photo that is many years older (e.g. over 15 years). In this case, additional proofing measures should be enforced.

In order to achieve the best results, one should pay attention to the following rules when performing a PhotoVerify service:

## 1. For ID Photo Capture



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### 1.1

Align your camera so that it is looking straight down to your ID. It's best to use a smartphone camera and lay your ID on a flat surface such as a table top.

### 1.2

Focus your camera on and only on the photo, not the whole ID document. Fill your picture frame with the ID photo fully. Adjust your camera position and use zoom if necessary.

## 1.3

Avoid any shadow, reflection or visible holographic image on the ID photo. Adjust your camera position and angle if necessary.



## 1.4

Send only the photo image. We don't need any data on the ID document. Just the ID photo.



## 2. For Live Capture

### 2.1

Go to a room with good lighting. Ensure that lighting comes from the front. Avoid any lighting condition that creates shadows or uneven brightness on your face (e.g. windows from the side).



### 2.3

Avoid any reflection on your face or glasses. Change your and/or camera position if necessary.

### 2.2

Wear your glasses if you wore them for the ID photo. Likewise, take off your glasses otherwise.



### 2.4

If prompted, turn your head only slightly, e.g. 2 to 5 degrees.



Examples to avoid



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