



28 August 2023

To whom it may concern,

iBeta Quality Assurance conducted Presentation Attack Detection (PAD) testing in accordance with ISO/IEC 30107-3. iBeta is accredited by NIST/NVLAP (NVLAP Lab Code: 200962) to test and provide results to this PAD standard ([certificate and scope](#) may be downloaded from the NVLAP website).

This testing was conducted with Persona Identities, Inc's Persona Selfie Liveness v2.0 application, used with backend cloud component Selfie Face Liveness 2.03. Testing of the active liveness detection solution was conducted from 21 August to 28 August 2023, on two devices: a Samsung Galaxy S23 running Android 13 and an Apple iPhone 14 Pro Max running iOS 16.6.

Testing was conducted in accordance with the contract for a level of spoofing technique that only utilized simple, readily available methods to create artefacts of the genuine biometric for use in the presentation attack. The subjects for the test effort were cooperative – meaning that they were willing and able to provide any and all biometric samples, including high quality photos and videos of their likeness. The test time for each PAD test per Presentation Attack Instrument (PAI) was limited to eight hours. This is considered a Level 1 PAD test effort (first of three levels).

The test method was to apply 1 bona fide subject presentation that alternated with 3 artefact presentations such that the presentation of each species consisted of 150 Presentation Attacks (PAs) and 50 bona fide presentations, or until 8 hours had passed. The results were displayed for the tester on the device as "Congratulations you're done! Thanks for verifying your identity" for a successful attempt or "Couldn't verify" an unsuccessful attempt.

iBeta was not able to gain a liveness classification with the presentation attacks (PAs) on either the Samsung Galaxy S23 or the Apple iPhone 14 Pro Max. Because of time limitations, not all 150 PAs for each of 6 species were performed. As a result, the total number of attacks was 1725, with 855 attacks performed on the Galaxy S23, 870 attacks performed on the Apple Iphone 14 Pro Max, and the Attack Presentation Classification Error Rate (APCER) was 0%. The Bona Fide Presentation Classification Error Rate (BPCER) was also calculated and may be found in the final report.

Persona Identities, Inc's Persona Selfie Liveness v2.0 application and backend component Selfie Face Liveness 2.03, tested on both the Samsung Galaxy S23 running Android 13 and Apple iPhone 14 Pro Max running iOS 16.6, was tested by iBeta to the ISO 30107-3 Biometric Presentation Attack Detection Standard and was found to be in compliance with Level 1.

Best regards,

A handwritten signature in black ink, appearing to read "Ryan Borgstrom".

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