



29 September 2021

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 Testing 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 the NEC Japan NEC_v1.8 application. The tested solution consisted of active liveness detection on an Android device and an iOS device. Testing was conducted from the 31st August through 27th September 2021 on two smartphones (Galaxy S20 with Android 10.0.0 and iPhone XR with iOS 14.6).

Testing was conducted in accordance with the contract for a level of spoofing technique that utilized materials available for under \$300 (USD) and which artefacts of the genuine biometric could be created in less than 24 hours, 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. The test time for each PAD test per subject was limited to 24 hours. This is considered a Level 2 PAD test effort (second of three levels).

The test method was to apply 1 bona fide subject presentation alternated with 3 presentations of each species resulting in 150 Presentation Attacks (PAs) and 50 bona fide presentations per artefact per device. The application displayed a successful message that stated "Real" for the bona fide as well as a "Fake" message for the artefact.

On both the iPhone XR and Galaxy S20 used in the test, iBeta was unable to gain a liveness classification (simulated enrollment) with a presentation attack of 150 times with each species of attack per device. With 150 transaction attempts for each species per device, the total number of attacks for both devices were 1500 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.

The active liveness anti-spoofing capability provided by NEC Japan NEC_v1.8 application was tested by iBeta to the ISO 30107-3 Biometric Presentation Attack Detection Standard and was found to be in compliance with Level 2 on the iPhone XR and Galaxy S20.

Best regards,

A handwritten signature in blue ink that reads "Gail Audette".

Gail Audette
iBeta Quality Assurance Director of Biometrics
(303) 627-1110 ext. 182
GAudette@ibeta.com