



29 March 2022

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 Passive v2.0 application. The tested solution consisted of passive liveness detection on both an Android and an iOS device. iBeta conducted testing on a Galaxy S21 5G running Android 12 and an iPhone XR running iOS 14.6. iBeta conducted testing from 14 March to 29 March 2022.

Testing was conducted in accordance with the contract for a level of spoofing technique that utilized materials available for under \$30 (USD) and which artefacts of the genuine biometric could be created in less than 8 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 8 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 alternated with 3 presentations of each species resulting in 150 Presentation Attacks (PAs) and 50 bona fide presentations per artefact per device. The results were displayed for the tester on the device as “Real” in blue for a successful attempt or “Fake” in red for an unsuccessful attempt.

On both the Galaxy S21 5G and the iPhone XR used in the test, iBeta was unable to gain a liveness classification with a presentation attack of 150 times per species per device. With 150 transaction attempts for each species per device, the total number of attacks for both devices was 1800 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 passive liveness anti-spoofing capability provided by the NEC Passive v2.0 application was tested by iBeta to the ISO 30107-3 Biometric Presentation Attack Detection Standard and was found to be in compliance with Level 1 on both the Galaxy S21 5G and iPhone XR.

Best regards,

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

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