9 November 2022

To whom it may concern,

iBeta Quality Assurance conducted Presentation Attack Detection (PAD) testing in accordance with ISO/IEC 30107-1 and 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 Shopee Pte Ltd's ALC ISO Demo v4.9 application and associated back-end component. Testing of the active liveness detection solution was conducted from 28 October to 9 November 2022, on two mobile phones: an iPhone 12 Pro running iOS 14.1, and a Samsung Galaxy A50 running Android 9.

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 Insturment (PAI) was limited to eight hours per subject. This is considered a Level 1 PAD test effort (first of three levels).

The test method involved enrolling subjects and having them authenticate five times successfully. Six species of presentation attacks (PAs) were then attempted ten times each. A successful match would state "Match Verified" and "Liveness Passed" or a failure message that stated "Match Not Verified" and "Liveness Failed". Over 720 total presentation attacks were attempted on the ALC ISO Demo v4.9 application across both devices. At the conclusion of the PAD testing, the subject returned and authenticated five times successfully to verify that the capture device and application was still able to recognize the genuine subject.

On both the iPhone 12 Pro and Samsung Galaxy A50, iBeta was not able to gain unauthorized access with the PAs yielding an overall Presentation Attack (PA) success rate of 0%, which then equates to the overall combined Imposter Attack Presentation Match Rate (IAPMR) of 0%. The bona fide False Non-Match Rate (FNMR) may be found in the final report.

Shopee's ALC ISO Demo v4.9 application on the iPhone 12 Pro and Samsung Galaxy A50 was tested by iBeta to the ISO/IEC 30107-1 and ISO 30107-3 Biometric Presentation Attack Detection Standard and was found to be in compliance with Level 1.

Best regards,

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