



6 February 2024

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 Tencent's Tencent Cloud eKYC v1.0 application installed on a Google Pixel 4 running Android 12, and Tencent Cloud eKYC v1.0.2 application installed on an Apple iPhone 13 running iOS 16.6. Both applications were supported on the back end by Vendor's liveness-server v0.0.14_706e28b_20231218150059. iBeta conducted active liveness testing from 19 January to 6 February 2024.

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 "Verification Success" for a successful attempt, and "Verification Failed" for an unsuccessful attempt.

iBeta was not able to gain a liveness classification with the presentation attacks (PAs) on the Tencent Cloud eKYC v1.0 or Tencent Cloud eKYC v1.0.2 applications over a total of 1800 attacks (900 per device), resulting in an Attack Presentation Classification Error Rate (APCER) of 0%. The Bona Fide Presentation Classification Error Rate (BPCER) was also calculated and may be found in the final report.

Tencent's Tencent Cloud eKYC v1.0 application installed on a Google Pixel 4 running Android 12, Tencent Cloud eKYC v1.0.2 application installed on an Apple iPhone 13 running iOS 16.6, supported by backend component liveness-server v0.0.14_706e28b_20231218150059, were tested by iBeta to the ISO 30107-3 Biometric Presentation Attack Detection Standard and were 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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