



21 June 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 PAPAGO Inc. Face8 v.1.44 application and the associated server 94e9ae7847f273bd3e3fb365b8dab56f336c8b50 (Checksum). The tested solution consisted of passive liveness detection on a Samsung Galaxy S21 5G running Android 12. iBeta conducted testing from 9 June to 20 June 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 “Live 100.00” for a successful attempt or “Spoof” with a number of less than 100.00 for an unsuccessful attempt.

On the Samsung Galaxy S21 5G used in the test, iBeta was unable to gain a liveness classification with a presentation attack of 150 times per species, 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.

The Face8 1.44 application and associated server provided by PAPAGO Inc. were tested by iBeta to the ISO 30107-3 Biometric Presentation Attack Detection Standard and were found to be in compliance with Level 1 on the Galaxy S21 5G.

Best regards,

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

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