



22 May 2019

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 the HID Global M321 fingerprint sensor with 64 bit drivers (version 7.00.00) and an SDK enrollment application (version 6.01.26).

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 latent fingerprints. The test time for each PAD test per subject was limited to eight hours. This is considered a Level 1 PAD test effort (first and basic of 3 levels).

On the test platform, eight subjects enrolled and authenticated five times successfully. Six species of presentation attacks (PAs) were then attempted five times each. As each attempt was conducted, the application would provide a fingerprint quality score, a liveness score, and a match score as well as a real-time display of the platen image. At the conclusion of the PAD testing, the subject returned and authenticated five times successfully to verify that the fingerprint recognition application was still able to recognize the genuine subject.

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 (IAMPR) of 0%.

The bona fide non-response error rate (BPNRR), Failure to Enroll (FTE) and Failure to Acquire (FTA) rates were also calculated and may be found in the final report.

Best regards,

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

Gail Audette
iBeta Quality Assurance Biometric Program Manager
(303) 627-1110 ext. 182
gaudette@ibeta.com