

TESTING

NBSP publishes first qualified product list

The National Biometric Security Project (NBSP), a US-based not-for-profit biometrics testing, training, research and analysis organisation, has announced that two biometric devices passed the premier round of its biometric performance testing. This means that the products are now featured on NBSP's first Qualified Product List of biometric products.

The products to have made it on to the list were: **Bioscrypt's Vision Access 3D Face Biometric Device** and **Integrated Biometrics' Terminal Reader Unit 650**, a physical access fingerprint reader.

The somewhat controversial idea of the Qualified Products List (QPL) is to identify those biometric products that have been subjected to an independent and objective test and evaluation of performance against a series of published Common Performance Standards (CPS) – see Table 1. The QPL test program consists of performance testing and, if applicable, standards conformance testing. The four main CPS against which all products are tested are:

- False Accept Rate;
- False Reject Rate + Failure to Acquire Rate;
- Failure to Enroll Rate;
- Throughput Rate.

Btt has learned that some products did not successfully complete the first round of QPL tests, but NSBP was unwilling to identify the products by name or by type, citing Institutional Review Board guidelines. NSBP said that “the ultimate purpose of the QPL is not to identify products that did not pass but to publish a list of products that potential users can be assured successfully passed all the common performance standards (CPS) that comprise the performance tests”.

Colin Soutar, CTO of Bioscrypt, stated that “We are pleased to be listed as a Qualified Product as a result of NBSP's tests. Bioscrypt has long maintained a tradition of providing industry-leading technologies for Enterprise Access Control and this is evidence that the latest addition to that product suite, our Vision Access 3-D Face Reader, performs in accordance with the expectations of NBSP's internationally-recognized tests. Of note is that the NBSP Qualified Products are tested under ‘real-world’ scenario tests, not off-line tests, and this demonstrates the robustness and maturity of Bioscrypt's 3-D face technology for practical deployments.”

According to Dan Page, president of Integrated Biometrics “...the QPL is the right test at the right time for the biometrics industry. For too long buyers have had to wade through a plethora of manufacturer performance claims...many of which were not realized in operation.”

Table 1: Common Performance Standards (CPS)

False Accept Rate (target value $\leq 0.5\%$)

A false accept occurs when a person not enrolled on a particular device is “recognized” or accepted by it. The FAR is computed as the number of false accepts observed on a device by the total number of impostor decisions made during the test period. For a family of devices, it is the total number of false accepts on all such devices divided by the total number of impostor decisions made by all the devices.

False Reject Rate* + Failure To Acquire Rate (target value $\leq 5.0\%$)

A false reject occurs when a person, enrolled on a particular device and submitting a correct PIN, is rejected or not recognized. A failure to acquire rate is the frequency that the device fails to acquire biometric information required for a decision. For a family of devices, it is the total of false rejects plus the failed attempts to acquire on all such devices divided by the total number of genuine decisions made by all the devices.

Failure To Enroll Rate (target value $\leq 5.0\%$)

A failure to enroll rate is the failure of the biometric system to form a proper enrolment template for an end-user. For a family of devices, it is the total of failed attempts to enroll on all such devices divided by the total number of enrolment attempts made by users on all the devices.

Throughput Rate (target value < 10 s)

The rate, in elapsed time (seconds or decimal seconds), at which a biometric sub-system or component will process one individual for access or transaction. The time starts when the individual presents his biometric feature for processing, including any action required to retrieve the file for matching, and stops when the match/non-match decision signal is indicated. The throughput rate is the mean time computed for a device for all transactions during the test period. The throughput rate for a family of devices is the mean time of all devices for all transactions during the test period.

**For the purposes of the QPL, the FRRs will be assumed to include instances of Failure to Acquire. It is beyond the means of the Class 1 testing to distinguish between the two types of errors. All possible measures will be taken to minimize FTAs.*

In the QPL testing process, each biometric device is tested over a six to eight week period by at least 200 NBSP trained operators. During this period, each device is activated a minimum of 10,000 times. The performance measures are determined by actual activations as opposed to theoretical computer analyses.

According to John E. Siedlarz, Chairman and CEO of NBSP: "Properly used, the QPL serves the buyer/user community as a useful tool ensuring specific products meet basic qualifications. If the performance standards met by products on the QPL are in the public domain, and if that criteria meets the requirements of any interested user, it saves them both money and time in the acquisition/selection process."

According to Siedlarz, the need for a biometric QPL, a concept first conceived by NBSP in 2005, was further demonstrated by the recent **Transportation Security Agency (TSA)** announcement of a specialised QPL testing program for biometric products that will be used in an aviation security environment.

The testing was conducted at the Test Research & Data Center (TRDC, LLC) a wholly-owned subsidiary of NBSP. Round 2 will begin in early August.

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