Product Description -- Biometric Liveness Detection Software

NexID’s Biometric Liveness Detection software enables fingerprint-scanning technologies to authenticate scanned images more accurately by mitigating fraud and spoof-related risks, thereby safeguarding against unauthorized access to protected locations or systems.

NexID software algorithms analyze scanned fingerprint images to determine the authenticity of the image source, answering the question: “Is the scanned image from a live finger or an artificial / fake fingerprint?”

The NexID software is integrated into the operating system / application of the fingerprint-scanning device that captures the images to be analyzed. It operates as a sub-function of the scanner in a manner similar to quality checking and image-matching software that also resides within the scanner’s operating system.

Here’s how NexID’s Biometric Liveness Detection software works:

- It analyzes the captured fingerprint image only; no other information or data is required from the fingerprint scanner
- Images from live fingers have inherent differences from those captured from fake prints; the software exploits those inherent differences
- Using image processing, artificial intelligence and statistics of more than 150 features in the captured image related to ridges, valleys, and pores of the fingerprint, NexID software calculates a “liveness score” that is returned to the scanner’s operating system
- The scanner can then accept or reject the image, depending on the threshold of its false-reject and false-accept settings

While a couple of companies have developed their own proprietary liveness-detection techniques for fingerprint scanning, all other scanning devices deployed today are 100 percent vulnerable to spoofing. Integrating with NexID software drives down that vulnerability to the range of 2 – 4 percent, meaning that 96 – 98 percent of the time a spoof will be correctly identified and authentication will be rejected by NexID software.

NexID’s Biometric Liveness Detection software is delivered either as a custom implementation of executable code integrated with scanner’s operating system, or in the form of an SDK. Custom implementations are a combination of professional services to conduct image collections, algorithm training and software integration. The SDK allows clients to do their own collections and integration, or outsource any part of the deployment to NexID. The current SDK supports both Windows and Linux platforms. Support for ARM/Android is under development.