



MAKING PERU'S ROADS SAFER WITH PAD

IB's Columbo Fingerprint Scanner with PAD (Presentation Attack Detection)

Partnered with [Murdoch Sistemas](#)

Ministerio de Transportes y Comunicaciones (MTC) is the organization responsible for issuing drivers' licenses to the citizens of Peru, Ministerio de Transportes y Comunicaciones (MTC). The ministry sought a solution that incorporates biometric authentication and live finger validation mechanisms with equipment that provides speed, ease-of-use and accuracy in fingerprint capture. Their teams must carry out the validation of people with clear easy-to-read fingerprints, as well as those who may have deteriorated fingerprints.

Whether taking in the mountain terrain, long stretches of desert coast, the extensive rainforest, or navigating through its cities, citizens in Peru must meet specific requirements to obtain a driver's license. While passing the driver's test is standard, citizens must also pass a medical exam.

Medical centers in Peru are responsible for evaluating the health status of citizens who wish to acquire their license. Authorized personnel then send these results to Exitos MTC, the Transport and Communication Ministry responsible for issuing driver's licenses. Verification of the identity of each citizen must be authenticated.

Enter biometric verification.



Presentation attack detection, or PAD, is the comprehensive approach to spoof-detection which includes both anti-spoofing and liveness detection technologies. Both are discrete methods to approaching biometric fraud, and each is optimized to resolve a distinct issue. **Anti-spoofing** refers to the detection of an artificial copy of a real or synthetic fingerprint. **Liveness detection** refers to the validation of human tissue as belonging to that of a genuine, living human being.

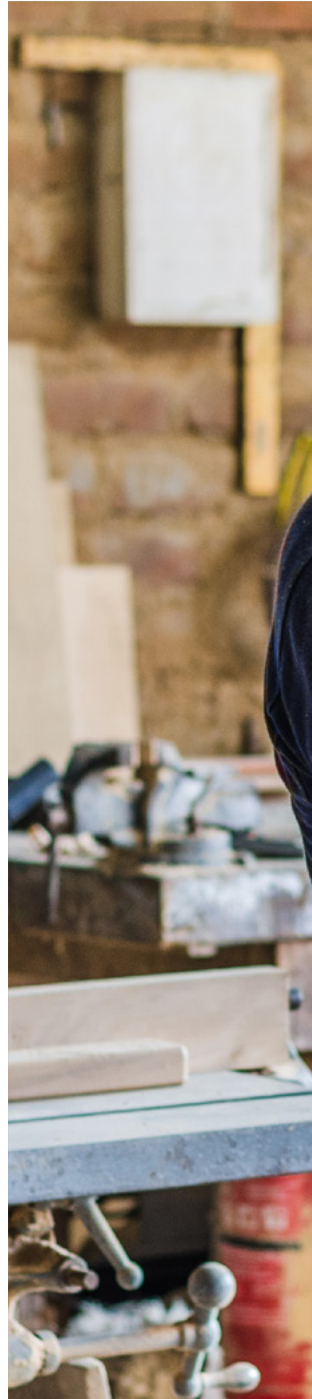
In Peru, the use of fingerprint validation equipment has increased in many public and private institutions, such as banks, telecommunications companies, public notaries, among others. Motivated by the high rate of document falsification and impersonations in different procedures, equipment that has live fingerprint verification mechanisms is now required and is validated in the RENIEC database (National Registro Nacional de Identificación y Estado Civil).

TACKLING A MAJOR ROADBLOCK WITH THE RIGHT HARDWARE

In searching for a solution, MTC turned to Murdoch Sistemas.

To implement live fingerprint scanning, a number of factors came into play. The MTC required a system that implemented biometric authentication and live finger validation that was both easy to use and fast. Its teams must also be able to validate people who have clear fingerprints in good condition, as well as those who may have damaged or deteriorated fingerprints.

Implementing fingerprint verification presented its own set of challenges. Several devices tested initially did not have the ability to verify living fingerprints and were not usable. With several systems that were able to scan live fingerprints, the capture of fingerprints proved difficult and slow, generating delays and annoyance in the medical centers. Additionally, there was little to no support to implement improvements in the validation and calibration of the equipment.



“IB’s LES technology for fingerprint capture was the most attractive. This technology gave us a very good alternative to meet the requirements of security and ease-of-use. Likewise, the scanners show better responses when reading the deteriorated fingerprints of some users.”

AN IMPROVED SOLUTION

Ultimately, MTC was presented, through its partner Murdoch Sistemas, with Integrated Biometrics Columbo scanner with PAD (presentation attack detection). Three main attributes were critical. First, the speed in which Columbo was able to capture fingerprints was faster than any other solution. Additionally, the Columbo was able to scan fingerprints that were damaged due to either age or long-term hard work, eliminating false prints. Third, support provided by the IB team was instrumental in assisting with software improvements after the initial start-up was implemented.

ADVANTAGES

Issues with damaged fingers were greatly reduced

Avoids having to make extra payments to obtain an exemption certificate granted by another entity.

Fewer cases of impersonation

Reduced inaccurate reports due to the use of false fingerprints

Time Savings

Allows institutions involved to save time as well as streamline service to users.

Response Time Reduced

Faster validations enable medical centers, responsible for evaluating the health status of citizens who want a driver's license, to comply with established times to perform care.



IB vs Competition

Number of attempts to
obtain a fingerprint with live
fingerprint validation

Other tested products: 3

IB: 1 attempt

Response time for
fingerprint capture with live
fingerprint validation

Other tested products: 30 sec

IB: 2 secs

Time taken to indicate
that a fingerprint is false

Other tested products: 30 sec

IB: 2 secs

TIME SAVINGS, ACCURACY AND SUPPORT ARE KEY

In Peru, security is an issue that requires emphasis and rigor to maintain. Attempts to violate any security measure are common, and biometrics is no exception. MTC chose to continue to utilize and expand the IB solution based on its ease of use and speed to users while meeting the rigorous demands of accurate authentication. They noted specifically the level of support that IB offers and the ability to streamline services for their member Institutions that the IB scanner delivers.

"I liked (IB's) willingness to provide support and alternatives to improve the service provided by their teams. They even provided information on the service channels of other manufacturers that we tried to contact without success."

Other solutions averaged 30 seconds capture time, with the user's finger on the reader until the fingerprint was captured, to indicate a fingerprint was false. **With IB scanners this was reduced to 2 seconds.**

- Medical centers in Lima: 137
- Users per day: 60
- Fingerprint readings per user: 4
- Daily average: 240



ABOUT INTEGRATED BIOMETRICS

Integrated Biometrics, LLC designs and manufactures FBI-certified fingerprint sensors for law enforcement, military operations, homeland security, national identity, election validation, social services, and a wide range of commercial applications. The company's patented light emitting sensor technology enables lightweight scanners that outperform traditional prism-based devices in size, power consumption, portability, and reliability. Identity management solutions providers, government agencies, and corporations around the world rely on Integrated Biometrics' products to enroll and verify individual identity quickly and accurately, even in remote locations.

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LEARN MORE ABOUT COLUMBO

A FBI PIV Certified FAP 30
Single-Finger Scanner

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