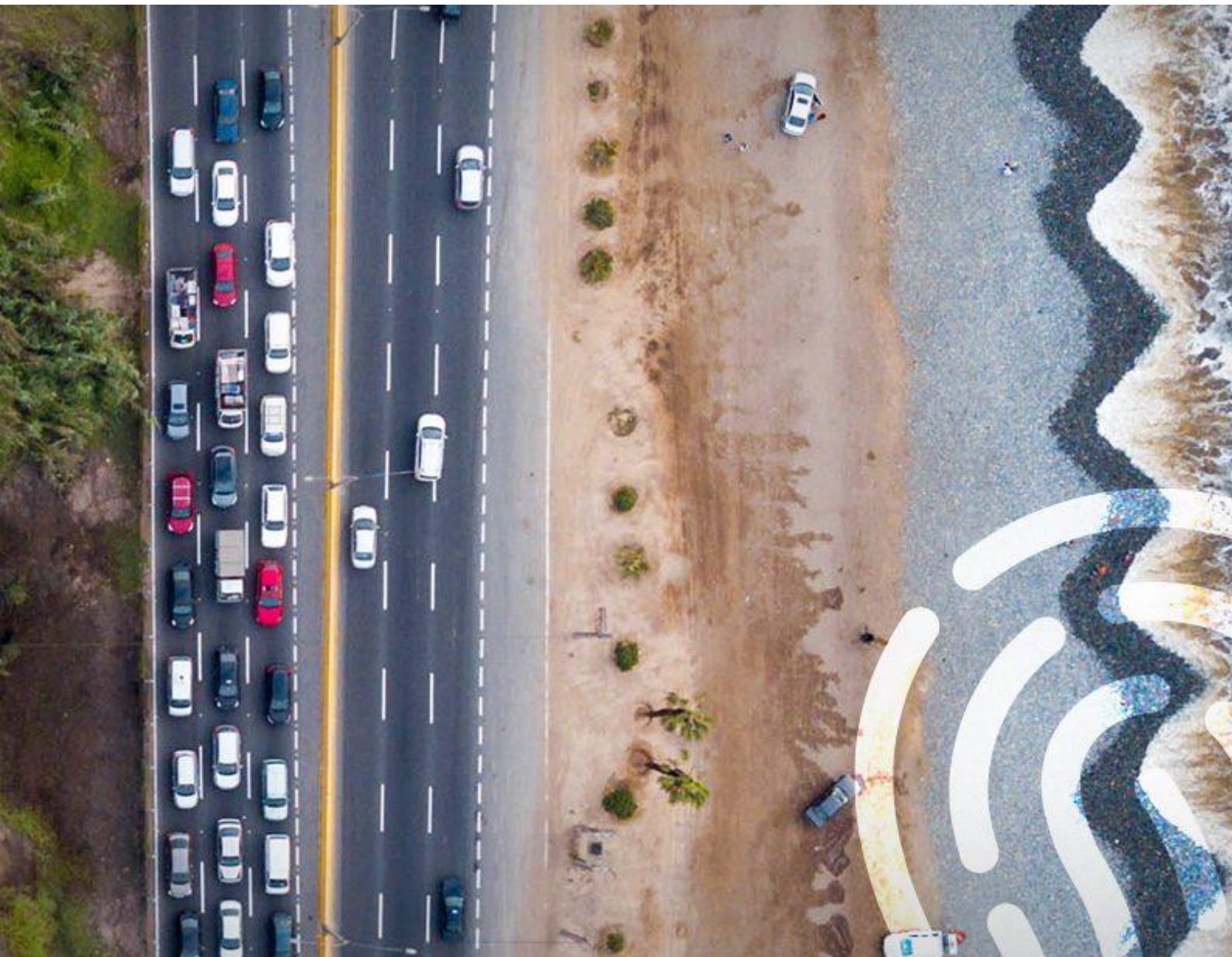


Sep 10th, 2021



Making Peru's Roads Safer With PAD

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

Prepared with Elvis Campos, MTC
Partnered with Murdoch Sistemas*

Elvis Campos works for the organization responsible for issuing drivers' licenses to the citizens of Peru, Ministerio de Transportes y Comunicaciones (MTC). His team 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.

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).

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.

Tackling A Major Roadblock With The Right Hardware

In searching for a solution, Mr. Campos 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.

An Improved Solution

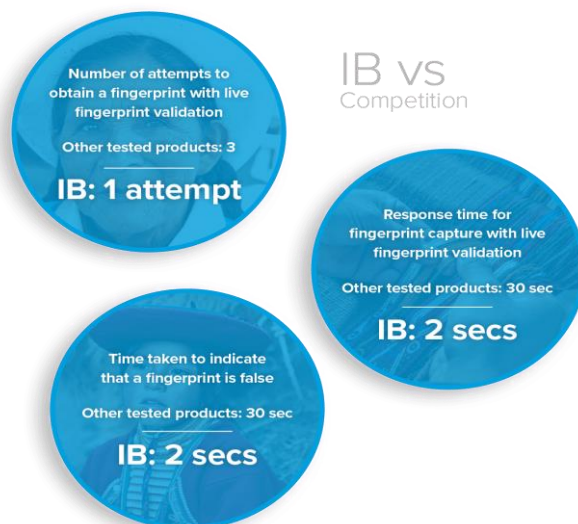
Ultimately, Mr. Campos was presented, through his partner Murdoch Sistemas, with Integrated Biometrics Columbo scanner with PAD (presentation attack detection). Three main attributes were critical. First, the speed in which Columbo was able to capture fingerprints was faster than any other solution. 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.

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.

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.

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 the willingness to provide support and alternatives to improve the service provided by their teams. Even provide information on the service channels of other manufacturers that we try to contact without success."



Columbo

The most accurate solution for unattended verification. [Visit the Columbo product page](#) to learn more.

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.

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- Users per day: 60
- Fingerprint readings per user: 4
- Daily average: 240
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*Elvis Campos is not a partner of Murdoch Sistemas nor of Integrated Biometrics. He only provided a technical narrative of someone who worked in the MTC.

About Integrated Biometrics

Integrated Biometrics (IB), a pioneer in biometric fingerprint technology, designs and manufactures advanced, high-resolution touchless and FBI-certified contact identity solutions for government, law enforcement, military, social services, and a wide range of commercial applications. IB's lightweight scanners, supported by our patented light-emitting sensor (LES) technology, outperform traditional fingerprint devices in size, power consumption, portability, and reliability. Global organizations rely on IB's products to enroll and verify identities quickly and accurately, even in remote locations under extreme conditions. Commercial enterprises, government and financial services organizations depend on IB to build innovative, secure applications to establish identity in accordance with national and international standards.