FUJITSU

# Case study
# PalmSecure – over 700 million transactions without any fraud incident

»Bradesco was looking for a new technology that would be fraud proof – **"zero defect"**
to authenticate your customers on any ATM transaction«

Douglas Francisco, CTO, Banco Bradesco S.A.



## The customer

Country: Brazil
Industry: Finance – second largest bank
Agencies : over 4.687
Installed ATM's: over 48.025
Customers: over 70 Mio.
Website: www.Bradesco.com

## The challenge

Top priority: Reducing fraud costs and increasing security of banking processes. More customer trust in automated banking.
Second priority: Reducing cost for handling, shipment and administration of cards and codes
Third priority: Customer satisfaction and convenience for customers.

## The solution

Developing a secure solution together with Fujitsu PalmSecure Sensor and to fill out all ATMs with it.

## The customer

**Banco Bradesco S.A.** is one of the largest banks in Brazil along with Banco do Brasil, Itaú Unibanco and Santander Brasil. It was the largest private bank in Brazil until Banco Itaú and Unibanco merged in 2008. The Bank provides a comprehensive range of financial services for personal and business customers. It offers current, checking and saving accounts, personal and business loans, debit and credit cards, investment banking, asset management, life, health, accident and car insurance, individual and corporate pension plans, online and phone banking and much more. Banco Bradesco is also one of the largest credit and debit card issuers in Brazil, with over 90 million credit cards and over 64 million debit cards (2012). With about 105,000 employees, Bradesco serves more than 59 million customers through a network of 13,083 own service points (including 4,687 branches in all of Brazil's states), 49,653 third party service points and over 48.025 ATMs across Brazil.
Bradesco is the most profitable among banks in Brazil and the USA In 2012, Bradesco had a 17.27% average return on assets, placing it at number one in the Economatica ranking.

## The challenge

The number of transaction frauds and security breaches in traditional security systems such as passwords are rapidly increasing, and the necessity for a strong authentication method become inevitable. Due to the role of customers in progress of banks, and thus in the economic development of countries, banks should provide convenient and more secured banking services to customers.
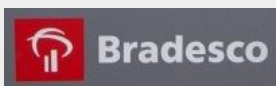
Banks could not meet this aim via using traditional authentication methods such as identification cards and passwords/PIN, because there are many attacks that could be launched against this authentication system. Palm vein biometric technology is a perfect solution to defeat these threats.

## The solution

The escalation in the number of sophisticated crimes and frauds in the banking sector served as the catalyst for Bradesco to tighten its security. After researching various biometric technologies, Bradesco chose Fujitsu PalmSecure for its outstanding features, such as high levels of verification accuracy and being non-invasive and hygienic, making it easier to be accepted by customers of the bank.

The bank currently uses Fujitsu's PalmSecure biometric palm reader in its ATMs. The biometric sensor scans the vein pattern of a user's palm and matches it to a database where the account holder has pre-registered their data to verify an individual's identity.

## The benefit

Bradesco uses a three-factor authentication. By over 700 million transactions, there was no fraud incident. Fraud costs are signifcant reduced and customers have more trust in electronic banking – more: in the eyes of the customers, money is safe at banco Brasesco and their accounts are secured and safe.

In addition to Bradesco's card-plus-hand ID system, here's also the option of getting cash without a card - consumers just place their hand on the scanner and enter a couple of codes. The system is incredibly convenient. It's also extra secure.

After the good experience with the palm vein technology, Bradesco plans to use this technology also for home banking.

"Since the biometric system, fraud declined. Other ATMs don't show the same improvement since they don't have that system. So it did help Bradesco to avoid fraud."

Bradesco has also explored another benefit of Fujitsu palm vein technology: life detection, which means that people who receive their pensionpayments through Bradesco ATM's no longer need to present paper documents to prove to the Brazilian social services agency that they are still alive. This reduces paper and time efforts and help to reduce unwarranted payments.

## How palm vein detection works

Palm vein recognition is based on the absorption of infrared rays, i.e. heat rays, which encounter venous blood in the palm veins, i.e. blood that is flowing back to the heart. The sensor in the entrance terminal sends near infrared light to the palm. The oxygen-reduced blood in the veins absorbs the infrared light. The camera of the PalmSecure sensor makes a picture of the vein pattern, encrypts it into a special algorithm and then transforms it into a biometric template, which is then saved in a database.
Palm vein recognition with PalmSecure is practically impervious to environmental influences and is due to its touch-free nature a very hygienic procedure. It only works with living tissue and in view of the present state of technology is free from manipulation. PalmSecure also provides significantly higher precision and security than the biometric recognition of a finger print or an iris. As the use of PalmSecure at Bradesco shows, it is easy, quick and convenient for the user to handle.

Biometric palm vein sensor technology is also increasingly proving itself in everyday life. The advantages of this technology are:

- Age-independent, individual vein structure
- A secure and manipulation-free biometrical feature under the human skin is scanned.
- Impervious to dirt, moisture and superficial injuries of the hand
- High degree of precision and protection against forgery, CC-certified (Common Criteria)
- Ergonomic, simple handling
- Error rate in practice of 0.00008% as regards an unauthorized person falsely gaining access or 0.01% for an authorized person being incorrectly denied access

## The benefits of the PalmSecure solution:

- Uncomplicated, fast registration process
- Highly secure authentication through palm vein recognition of the person – not of a medium
- Fast authentication process
- Impervious to environmental influences
- Exceptionally high level of user acceptance
- Simple implementation of "true authentication"
- High degree of data security
- Biometric data only has to be entered once in a lifetime

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