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ATMs celebrating their 40th birthday

Spain ranks second in terms of terminals per capita.

Natalia Sanmartin Fenollera, Madrid

In the summer of 1967, some customers of Barclays Bank in north London began to behave strangely. After acquiring a check impregnated with carbon 14 in the window of the bank branch, users would carefully insert it into a terminal next to the office. Here they would key in four secret digits and within seconds the machine would give them a reward: ten pounds. The invention was called DAC (the automatic cash system) and not only revolutionized the banking structure of the time, but it introduced the philosophy of self-service 24/7 banking, and changed the way that millions of people worldwide do business. It marked the decline of the widespread practice of saving cash at home, and eliminated the need to wait patiently in front of a window in order to garner funds. The person responsible was John Shepherd-Barron, managing director of our company, De La Rue, who identified the need for access to cash during the weekends when the bank branches were closed, explains Aflonso Marto, Self-Service Product Manager at De La Rue, a multinational company specializing in solutions for the financial technology sector.

57,000 ATMs in Spain

Forty years after the installation of the first ATM, roughly 1.3 million terminals are spread across the planet. The exact figure is difficult to calculate, as it is estimated that every seven minutes a new ATM is installed somewhere in the world. Spain is no exception. "Spain is the country with the highest number of ATMs per inhabitant in Europe, and second in the world after Japan. There are currently 57,000 ATM terminals, with an average of more than 1,400 ATMs per million inhabitants," explains Alfonso Maroto.

The race for innovation in this sector has grown rapidly over the last four decades. In 1987 the first ATM with a color display hit the streets. A decade later, in 1991, ATMs were selling tickets for shows. In 1995 they went a step further: it was time for touch screens.

The device created by Xelios recognizes only live fingerprints.

"One of the biggest changes will come in 2008, with the implementation of the ATM SEPA standard, the single payment area for the Euro, which will mean that by the end of 2010 all the EU cards should be adapted to EMV (Europay, MasterCard and Visa). By then, all the cards will have to incorporate a chip that will allow its use in any EU country", explained the specialist of De La Rue.

Many of the more recent innovations have to do with the fight against fraud. "We are a company dedicated to fingerprint recognition. Our technology is based on military systems, but given the growth in civil fraud we have also focused on this market. Financial institutions sought us out to develop a device that could respond to growing threats from fraud," explains Francisco de Asis Romana, president of Xelios Biometrics.

The device created by Xelios is a biometric sensor with embedded technology that eliminates the possibility of fraud: it exclusively recognizes live fingerprints, which negates the possibility of fraud using a fake finger or the hand of a corpse. Other companies have offered fingerprint recognition products for ATMs, but they are not interoperable with existing infrastructure. Installing them would mean changing the whole ATM network and as a result, would be more expensive than the losses from fraud, warns Roman. The solution from Xelios will be seen in the streets of Spain this year; it's a kit that can be installed in any ATM. Its price: 1,400 Euros.

Automated tellers have become almost ubiquitous on city streets in Spain. According to the consulting firm TNS, 46% of banking customers preferred operating through this device, compared with 26% who preferred the attention of the bank staff. Another report, this time from consulting firm KungeClient, revealed that Spanish users visit an ATM an average of 83 times per year, more than double the number of times they visit a bank branch. "An ATM usually fails, depending on its use, five to seven times a year. This average does not include breakdown failures caused by robbery or vandalism. Mechanical parts fail more often than the logic of the machine and, contrary to what it may seem, most evolved ATMs have more breakdowns then the more outdated ones" says Alfonso Maroto. Despite all the advantages, security at ATM terminals is a major problem for users and institutions, plus an ongoing challenge for companies specializing in security. "Embedded chip technology will significantly reduce financial fraud, 60% of which is caused by counterfeit bank cards. But there are already thoughts of going further. By integrating biometrics, soon there will be no need to memorize passwords or carry plastic money in the form of a card" concludes Maroto.

The future is already here.

Quality

ATMs of the future will control the quality of the currency. "When processing a bill that is in poor condition, the ATM itself will withdraw it from circulation. Also there will be more ATMs installed that support other currencies. In European countries like Germany and Belgium, we are already doing it," says Maroto.

Anti-coercion

The Xelios biometrics sensor kits that are being manufactured for various banks already include anti-coercion measures. At enrollment, three fingerprints will be taken: two for normal operations and one for anti-coercion", explains Fancisco de Asis Romana. When using the anti-coercion fingerprint finger, a silent alarm is activated and there are three possible choices (chosen by the entity): to slow down the transaction, to display a message indicating that no funds are available, or to be able to withdraw a maximum amount of 60 euros.