

EUREKA CLUSTER PROJECT CATRENE NEWPASS



PASSPORT TO THE FUTURE

French digital security giant Gemalto led an ambitious European project that developed the most sophisticated electronic passports yet.

The first electronic passport came out in Malaysia in 1998, but most countries didn't start issuing them until just over 10 years ago. The market is steadily growing and by 2019, more than half of passports in circulation will be electronic, estimates business consultancy IHS Technology. European companies will likely remain some of the leading providers of the technologies needed to make them secure and effective, thanks to EUREKA! Cluster project NewPass.

Headed by Gemalto, world leader in digital security, NewPass designed and tested the next generation of electronic passports – documents capable of storing unprecedented levels of personal information in the chip on them. The team's experts worked to ensure the passports would allow passengers to move through airport security checks quickly while not being easy to hack or copy by criminals.

"We've prototyped the world's fastest and most secure e-passport with a combination of high-processing speed and the most advanced cryptographic mechanisms," said Michael Guerassimo, project coordinator on NewPass from Gemalto's Government Programs Solutions Group.

Research institutes in France, Portugal and Austria worked with some of Europe's best manufacturers of semiconductors, electronics, biometric systems and security solutions to design two new generations of e-passports, which include better encryption and biometric data protection.

In a world where air traffic is increasing and terrorist threats remain, the new documents were designed to cut down time spent going through security checks by allowing time stamps to be added by machines to identify passengers. The group showed scans of a passenger's iris

“We've proto-typed the fastest e-passport in the world and the most advanced to date in terms of cryptographic mechanisms” – Michael Guerassimo, open innovations project coordinator at Gemalto

could also be incorporated into electronic passports.

Safety in numbers

The passport chips they developed had 10 times the memory of previous ones but could still be read quickly by the devices they produced to read them. “The

communication speed is really impressive, especially since the e-passport doesn't contain any in-built energy source – the energy to make it work is drawn from the passport reader's magnetic field,” said Guerassimo.

He doesn't think any one company could have achieved what the European consortium of 12 partners did. All the products and technologies produced are interoperable and meet international standards set by passport regulators. “A single company can't ensure the whole planet's security. Cooperative projects are essential in this field,” said Guerassimo.

The industrial partners have boosted their market positions as a result of NewPass. The companies will also use the technologies developed for other uses, for electronic visas, ID cards and frequent flyer data.

One day soon, we could be carrying our identification – or at least a copy of it - on our smartphones, thanks to some of the hard work done on NewPass.

With the authorities likely to set demanding standards from future documents to combat fraud and people trafficking, Guerassimo says the partners are committed to continuing their research in the field. “Security is a never-ending race – we have to be state-of-the-art to protect data and stay ahead of criminals.”

MAIN PARTNER

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OTHER PARTNERS

Giasecke & Devrient (DE), CEA-Leti (FR), Instituto de Telecomunicações (PT), ISEN (FR), TU Graz (AT), Evoleo Technologies (PT), ID3 (FR), Compuworx Informatikai (HU), Infineon Technologies (DE, AT), NXP (AT, FR, DE), ST Microelectronics (FR)

TOTAL R&D INVESTMENT

€ 22 M

DURATION

June 2012 to June 2015

COUNTRIES FUNDING THE PROJECT

Austria, France, Germany (BMBF), Hungary, Portugal

EUREKA is a European network for market-oriented R&D.

