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EUREKA PROJECT SHOWCASE > MEDEA+ ONOM@TOPIC+ The really smart card

Soon we will use our mobile phone to buy bus and train tickets and access health and other public services in other European states by just presenting an electronic card or passport, thanks to technology developed by a EUREKA partnership.

Most of us hate standing in queues or filling out forms, however patiently we suffer them. Electronic documents and signatures could save hours of our time running to offices and waiting for our identities and details to be checked, but attempts by governments and companies to use them have tended to be patchy. That is quickly changing, however, thanks to the results of an ambitious project, which has developed revolutionary global solutions.

Five years ago, developers at digital security solutions specialist Gemalto realised governments were increasingly introducing electronic passports or electronic identity documents and more and more telecoms operators were piloting new services where consumers could buy goods using technologies such as SMS. However, they believed for e-identity documents or mobile transaction systems to be useful they needed to be recognised by more than one government or mobile operator and use a few common security and transaction standards in a similar way to credit cards.

Gemalto teamed up with 15 other companies from six European countries to develop a set of international standards related to e-identity and mobile transactions and to demonstrate concrete implementation of these standards. At the heart of the project were advanced prototypes for new generation of e-ID cards or SIM devices. They called the project Onom@Topic+.

At a European level, they saw one clear tangible benefit for citizens: the possibility to access e-government services in other countries on the same basis as their own. 'We wanted European citizens to be able to access the same services in other member countries as at home' says Jean-Pierre Tual, Industrial Relations Director at Gemalto. For that purpose, the project partners defined all the background specifications for a new standard for European electronic identity documents using a smartcard system, called IAS-ECC -Identification Authentication Signature -European Citizen Card-.

On the mobile telecommunications side, the project found innovative solutions using the increasingly popular Near Field Technology, allowing the wireless exchange of data between two electronic devices. This technology breakthrough enabled the partners to make successful proposals to the international standardisation bodies.

Technically, the project was extremely ambitious and led to complex software developments. On the hardware side, special microchips for smart-cards were developed- very secure microprocessors incorporating advanced cryptographic material on which an individual's data could be stored, such as name, a photo and even other biometric data like fingerprints-. The proper handling of security issues was a major point, because for governments or other bodies like operators to be convinced enough to adopt the technologies from the project, they would have to be sure they would protect the e-id cards or SIM devices from being forged.

The exploitation of project results has become a reality. In the e-government area, the IAS-ECC standard has become the reference standard for all new major e-ID programmes running in Europe.

Telecoms companies are also deploying new services using the standards developed in the project. The partners have contracts to develop customer payment or loyalty schemes using smartcards as well as ticket buying through mobiles. 'The technology is used today by almost all telecoms operators developing this kind of services,' says Tual. 'We developed some extremely clever solutions implemented in many pilots world-wide. We are confident that mass deployments will come soon.'