ITEA
INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

PROJECT RESULTS

Simplifying mobile services

NFC touch-based user interaction opens up range of applications
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SmartTouch designed and tested a near-field communications (NFC) technology/ service platform and developed the concepts for corresponding business chains. In addition to demonstrating NFC-enabled services for payment and ticketing, the project piloted access control, infotainment and entertainment services. As a result, SmartTouch has enabled Europe to improve its competitive position versus Japan and the USA.

NFC offers short-range wireless connectivity that enables smart consumer devices to interact quickly and easily when brought close together or touching. Set up is fast and systems are intuitively easy to use. The technology brings the touch paradigm to mobile applications, allowing services such as mobile payment or ticketing by simply touching a reader with a mobile phone.

SmartTouch brought together a large number of technology and service providers, researchers and companies.

Technical partners tackled protocols, enablers, applications, security and privacy through pilot applications in home, city life and wellness areas. At the same time, other players examined the business areas for future mobile services.

As well as creating innovative applications, SmartTouch worked on technology enablers for application development and a basis for secure NFC services. The project provided the opportunity to create applications for mobile phones, such as a basic standard solution for subscriber-identity-module (SIM) based payment, and then building service solutions on top.

Partners carried out 33 pilots and 44 technology demonstrations to identify real-life applications and gain a greater understanding of the user experience.

Opening up NFC technology
Currently, the whole industry is looking at the development of payment and ticketing to open the way for NFC technology. SmartTouch piloted vertical applications such as payments in France and ticketing in Germany; smaller tests were carried out in Finland and in Spain. Horizontal sectors tackled included home consumer electronics, business-to-business manufacturing and telecommunications services.

A ticketing pilot in Frankfurt equipped 750 public transport stops with radio tags. NFC-enabled mobile phones make secure ticket purchases by touching a tag at a stop.

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SMARTTOUCH (ITEA 05024)
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Partners
Alcatel-Lucent
Fara
City of Oulu
Dan Company
ENSICAEN
Fagor Electrodomesticos
Gemalto
IDesia-Biometrics
Idesco
Ikerlan
Innovision Research and
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K.U. Leuven
MedicTouch
Nokia
Nordea
Philips CE, the Innovation Lab
Rhein-Main-Verkehrsverbund
Robotiker
Telefónica Investigación y
    Desarrollo S.A. Unipersonal
TeliaSonera
Telvent Tráfico y Transporte
    S.A.
ToP Tunniste
Visual Tools
VTT Technical Research Centre
    of Finland

Countries involved
Belgium
Finland
France
Germany
Israel
The Netherlands
Spain
United Kingdom

Start of the project
February 2006

End of the project
December 2008

PROJECT RESULTS

The phone user can also receive real-time information on schedules. And NFC-based mobile tickets are available for the entire area.

SmartTouch also examined ways of helping people with disabilities and the elderly. A pilot in Oulu, Finland offered a meal service for elderly people. A touch-based user interface embedded in a meal menu was used by elderly home-care clients to order meal for the following day. The application also allowed monitoring of the meal-delivery process in real time, increasing traceability and cutting down manual work.

The main breakthroughs in the project were in the technology to apply NFC, providing mobile handsets with relevant toolsets, protocol-level achievements in standards, making payment possible and methods for security in the production of NFC-enabled SIM cards. In addition, these elements were used in the creation of vertical applications, ticketing devices, locking devices and domestic electronic devices.

Partners have also been active on standardisation in the NFC and Mobey Forums, as well as in the GSMA mobile communications industry organisation.

Examples include the single wire protocol, NFC security aspects and context data representation.

Making a difference
Success is making major differences to:

- European citizens, who will benefit from natural and easy-to-use devices that may replace the contents of their wallets and even their house keys; and
- European industry, which will benefit through a range of sectors – including communications, banking and local government – having gained knowledge about the technology.

Project results are already being exploited. More than 22 products have resulted to date. These include NFC cards for PCs enabling Internet connections, ticket validators and readers, handset applications and smart-card systems.

One example is the touchatag spin-off from Alcatel-Lucent. This offers a contactless radio-frequency identification (RFID) tag that automatically launches services. For example, a tag on a painting could provide a mobile phone user with information about the painter.

Major project outcomes

Dissemination
More than 350 presentations, articles, research papers, seminars, conferences and media events, including tv and radio around Europe, and EU wide EuroNews.

Exploitation
Partner companies were able to develop and integrate NFC to more than 20 products. Over 40 technology demonstrations and 30 technology pilots were done.

Standardisation
Some partners active members of NFC Forum, Mobey Forum, and GSMA. Standard submission to ETSI.

Patents
15 patents by the end of 2008, numerous invention notices.

Spin-offs
1 known spin-off in 2008