

## TOMORROW'S SIM CARD

With the new NFC (Near Field Communication) technology embarked in mobile phones, the combination of wireless and contactless will make possible the deployment of new applications.

Our cell phone is becoming a bank card, an electronic purse, a transportation ticket, a company badge, a router for wireless networks, in short a common interface which will continuously exchange with our immediate environment. With the contactless technology, our phones allow us to perform transactions, exchange data with just one touch – “Touch & Go” or Touch & Pay.

### **The NFC technology**

This interface and contactless communication protocol, which was first developed by Philips and Sony (with its FeliCa technology) and became an international standard (ISO and ECMA), represents the new revolution which once again changes the use of the cell phone, after the SMS, digital photography, music, and 3G.

ABI Research, in a recent study (end of May 2006), states that around 2010 more than 50% of cell phones (more than 500 million) will contain an NFC chip. The market is promising in view of the importance of the applications, the volumes of generated transactions, and the opportunities they represent for the telecom operators, but also because of their versatility. As Dr Francesco Patro, who is responsible for NFC Business Development at Philips Semiconductors, says, “*The beauty of NFC is that the chip can behave as a card and as a reader.*” This technology will therefore make possible a wide range of applications.

### **Future applications**

#### *Payment*

The early signs for the development of this application can already be seen in Asia and the United States. In Asia, the first applications for contactless payment using an embarked chip (the Felica chip by Sony) in a mobile phone were launched in 2006 in Japan and Korea. In the United States the success of contactless payment (Visa Wave and MasterCard Paypass) is opening the road to the use of cell phones for contactless payment applications. As a matter of fact, ABI Research considers that the 10 or 15 million contactless payment cards delivered in 2005 in the U.S. and the 40 million projected for 2006 were only an “intermediate step” toward the widespread use of the mobile.

#### *Transportation*

This is still the foremost application of the contactless smartcard (a little over 40% of the market according to Frost & Sullivan). It is one of the major applications aimed at by the NFC technology. Nokia, Royal Philips Electronics, Vodafone and the transport operator Rhein-Main-Verkehrsverbund (RMV) launched in April 2006, after a period of testing. It was also the first commercial deployment in Germany of a ticketing application (combined with a loyalty card) using mobile phones. In France, Gemalto, Bouygues and the RATP experimented on a similar basis in the Paris metro.

#### *Smart posters*

This is still a very experimental and fresh area, but work is ongoing to develop the first applications. The idea is to insert NFC chips in advertisements for products or shows which will transmit information to the mobile phone owners. With an easy touch - “Touch & Act”-, the latter will receive in their cell phone additional information, useful addresses, and will be able to purchase a ticket for a show and therefore make use of their cell phone to access the theater without having to queue.

*Electronic equipments*

The easy-to-use NFC technology, its low consumption, its security (often linked to the phone's SIM card), but, at the time being, its limited speed (484 kbit/s) will make it a sort of smart and secure router to initiate and authorize WiFi or Bluetooth connections (in the future generations of hybrid phones), which are complicated to implement and are not so much secure.