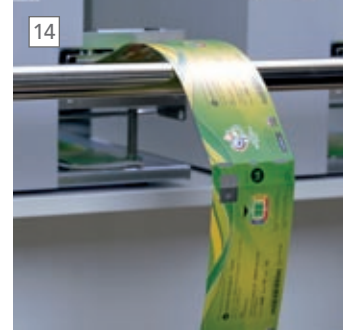


# on the move



Meet NXP Semiconductors at Cartes 2006 • eGovernment solutions • JCB launches NFC mobile payment pilot in Europe • Partner Perspective – Bundesdruckerei GmbH • 100% ICODE – making a statement in the fashion world • ISIC card brings more benefits to students • The final whistle



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# What if you could

## Meet NXP Semiconductors at Cartes 2006

What if you could have a partner with the vitality of a newcomer and the know-how of a veteran? You can with NXP Semiconductors. Founded by Philips as a leader in vibrant media technologies, NXP is a new company with over 50 years' experience.

The long supply chains of the identification market mean strong partnerships are critical for success. And Cartes 2006 is the ideal place to re-affirm those partnerships. Running from November 7 to 9 at the Parc des Expositions in Paris, it is Europe's premier smart card and identification event.

So come and say 'hello' to NXP Semiconductors at booth C-013 in Hall 3. You'll have the chance to explore our new identity, experience our easy-to-use demos and connect with our technology.

You'll discover that, while the name has changed, we've kept hold of everything that's best about who we are. But now we're lighter on our feet with a sharper focus on our customer relationships and a stronger commitment than ever to succeed! With NXP as your partner, you'll continue to benefit from our insight and in-depth knowledge of the identification market. And of course, we will continue to work with you to deliver the next experience in identification groundbreaking technologies like NFC.

### NXP on show at Cartes 2006

- **Personal ID**

Pick up your personal token that lets you access all areas of the NXP experience

- **eGovernment and access control**

Use your token to enter our demo area and find out about ePassports and access control

- **Automatic fare collection**

Load a ticket for your journey through our demo area onto your token

- **NFC in hotels**

Make a reservation for a hotel room then get confirmation via your cellphone which becomes your room key, WiFi gateway and an easy, secure way to pay the bill

- **Coffee shop**

Buy drinks with your token from the coffee machine in our meeting room

# eGovernment solutions: security, privacy and convenience

Governments are increasingly using electronic systems to offer new and more efficient public services. The ability to accurately identify individuals is critical to these services and chip-based documents provide a secure way to do this while maintaining personal privacy.

## **What is eGovernment?**

Covering everything from on-line voting to road traffic management, eGovernment refers to a government's use of technology to interact with its citizens in order to improve services and streamline operations. Providing secure, electronic storage of an individual's personal data, chip-based identification documents are a cornerstone in many of these electronic interactions.

Probably the most well-known of these documents is the ePassport, which has already been implemented in a number of countries driven by the United States' Visa Waiver Program (VWP) (see page 7). Now a growing number of other official documents are also going electronic. These include national ID cards, driving licenses, health cards, social security cards, residence permits, visas, site access passes and vehicle registration documents.

Adding secure smart chips into existing documents not only increases system security, it also opens up possibilities for new services. For example, holders of the Austrian 'eCard' who opt to upgrade it from a health and social security card to a citizen card can use it to access government services and digitally sign online documents. The Austrian government has such trust in the technology that documents signed this way are as legally binding as traditional, hand-signed documents.

## **Increasing security**

The rapid introduction of ePassports and other electronic ID documents supports the worldwide

demand for higher security. Electronic documents are much more difficult to forge. Furthermore, they can store biometric data such as fingerprints, making it almost impossible for people to use stolen documents. However, if electronic ID is to be widely accepted, the smart card technology behind it must itself be extremely secure.

The SmartMX family from NXP Semiconductors (see box page 5) sets the standard for biometric passport ICs. Devices in this family have more than enough memory to store the necessary biometric data. In addition, the family includes the first biometric passport ICs to be awarded the highly regarded CC EAL5+ certification.

As Michael Ganzera, eGovernment Marketing Manager at NXP, explains: "We're bringing our extensive security experience from the banking sector into highly secure eGovernment solutions. Banking traditionally has the highest security requirements in the industry because people have been more worried about losing their money than their ID documents."

## **Protecting privacy**

Another key factor in the general acceptance of electronic ID is the public's confidence that their privacy is protected. Concerns over privacy vary from region to region. People in Asia are more accustomed to giving out personal details than those in Europe and America. In these latter regions, there have been a number of reports in the more sensationalist areas of the media suggesting that electronic ID is a threat to personal privacy. >





## SmartMX: the eGovernment solution

The SmartMX secure smart card IC platform is the ideal solution for ePassport and eID card applications. It offers both contact and contactless interfaces, and ensures the highest level of security through triple-DES and PKI encryption. In fact, the only smart card ICs to have achieved CC EAL5+ certification are members of the SmartMX family.

Thanks to ultra-low power handshaking technology, it delivers the highest performance and full ISO 14443 compliance. Furthermore, the SmartMX family offers a range of memory options and sizes with up to 144 Kbytes EEPROM – more than enough space to store all the

biometric information needed for accurate and secure identification.

- Industry-leading 3rd generation dual / triple interface chip technology
  - contact, contactless, dual interface and USB interfaces
- Up to 144 Kbytes EEPROM
- Meets low energy requirements for contactless operation according to ISO 14443A ePassport specification
- Optional 3-DES, PKI and AES hardware co-processors for maximum security
  - CC EAL5+ hardware security certification

>

However with electronic documents personal data is securely stored on the chip; not printed in plain sight where any unscrupulous eyes can see it. Furthermore, the data can be protected, for example by using trusted PKI algorithms. Hence, smart card chip technology offers much stronger safeguards against identity theft by securing the data on the chip. This is particularly true for the sensitive biometric data, which is only stored in the electronic ID's chip under the control of the rightful owner.

### Contactless convenience

At the moment, some 90% of the rolled-out eGovernment applications in the world use contact smart card interface technology based on the ISO 7816 standard. However, contactless systems are much more convenient for the user. They are also more reliable, support longer document lifetimes and can significantly reduce infrastructure maintenance costs.

It's no surprise then that the industry is going contactless. This move is being driven mainly by ePassports, where a contactless interface is vital because of the ePassport form factor and lifetime requirements. With the number of ePassports issued growing rapidly, many governments have realized that contactless smart chip technology also offers considerable advantages in other applications (see box).

Improving security and convenience at government establishments is one such application. The US government is one of the first to adopt contactless smart card technology for this purpose. It has launched a program to standardize physical access solutions at all government facilities, which has already been rolled-out by organizations such as NASA and the Department of the Interior.

### Everyone in the world

The sheer numbers involved make eGovernment solutions hugely interesting to companies in the smart-card value chain. For example, India will require around 150 million electronic driving licenses plus 10 million vehicle registration documents per year. Meanwhile, the Chinese ID card scheme is set to run to some 800 million cards.

To look at it another way, how many other applications have a potential market of over 6.5 billion people? And with the world's population increasing by almost the population of Germany each year, it's a rapidly growing market.

For more on eGovernment applications:  
[www.nxp.com/applications/smart\\_cards/access/](http://www.nxp.com/applications/smart_cards/access/)

For more on the SmartMX family:  
[www.nxp.com/products/identification/smartmx](http://www.nxp.com/products/identification/smartmx)

## Electronic entitlement cards take to the road

On April 1, 2006, Scotland launched a national, voluntary entitlement card scheme using contactless smart card technology. With 780,000 cards already issued and a total of 1.2 million predicted, it is the largest multi-application card scheme in the United Kingdom and the largest Integrated Transport Smart card Organization (ITSO) scheme in the world.

Based on NXP's MIFARE 4K IC, the card enables elderly and disabled people to take advantage of free bus travel throughout Scotland. However, it also offers scope for local and national

applications to be added at a later date. These are likely to include library and leisure memberships as well as a range of entitlements targeting young people, such as school catering and 'Young Scot' discounts.

The card forms part of the Scottish Executive's 'Customer First' program. A partnership between the Executive, 32 local authorities and other organizations, this program aims to improve the quality and efficiency of public services by giving people more choice over how they interact with local authorities.

# ePassports around the world

Today 50 countries around the world are looking to introduce ePassport schemes. Thirty-six of these countries have chosen NXP's industry-leading SmartMX secure ePassport chip.

Of the 50 countries, 27 made the decision to switch to ePassports to meet the requirements of the United States' Visa Waiver Program (VWP). Under the VWP, citizens in 'visa waiver countries' do not need a visa to visit the US for up to 90 days – as long as they have a chip-based ePassport.

The remaining countries are not included in the VWP, yet they are also choosing to implement ePassports. Why? Because ePassports help to speed up immigration and reduce forgery. They also mark countries out as technologically advanced and innovative nations – a cause for civic pride.

## Singapore

A VWP country, Singapore has announced plans to issue some 2 million ePassports. Not bad for a country with a population of just 4 million people. NXP is working with a variety of partners to implement the scheme, including Gemalto

and NEC Solutions Asia Pacific. The SmartMX chips for the passports will be manufactured by Systems on Silicon Manufacturing Corporation (SSMC), a Singapore-based producer of advanced semiconductor wafers.

For more information:

[www.nxp.com/news/content/file\\_1264.html](http://www.nxp.com/news/content/file_1264.html)

## USA

The originator of the VWP, the United States has also started rolling out smart-card-based passports. The chip in the passport will store the same information that is visually displayed on the photo page of the passport as well as a digital photo. To further enhance national security, the new passport will also incorporate additional anti-fraud and security features. In addition, it will include a number of measures to address privacy issues and ensure the safe-keeping of stored information.

For more information:

[www.nxp.com/news/content/file\\_1257.html](http://www.nxp.com/news/content/file_1257.html)

## France

In the spring of 2006, the French government announced its decision to start issuing ePassports. And just 5 weeks later the first ePassport was issued. That challenge was met by Imprimerie Nationale. "Due to the short timeframe of this project, we needed to work with reliable partners and mature technology," said Loïc Lenoir de La Cochetière, CEO of Imprimerie Nationale. "NXP and its SmartMX ICs fulfilled all our requirements and allowed us to meet the deadline without compromising on quality or security."

For more information:

[www.nxp.com/news/content/file\\_1242.html](http://www.nxp.com/news/content/file_1242.html)







## JCB launches NFC mobile payment pilot in Europe

Building on its mobile payment experience in Asia, JCB has launched its new contactless payment scheme in Europe: Mobile J/Speedy™. Started in early September at the World Trade Center in Amsterdam, the pilot project for the new service is already proving popular to the users, enabling them to pay with just a wave of their phone. >



## ***“Customers are very happy with the speed and convenience of the service.”***

The first contactless credit payment scheme of its kind in Europe, the project is a cooperation between JCB and several major regional and global firms including CCV Holland, Gemalto, KPN, NXP, Nokia, PaySquare and ViVOtech.

### **JCB leads the way**

The project is being led by JCB, the global payment brand and also the largest credit card company in Japan. JCB cards are issued in 20 countries/territories mainly in Asia, and accepted at 190 countries/territories worldwide. The company is now building its presence in Europe with branches in the United Kingdom, Germany, Italy, Austria, France, Switzerland, Spain, and the Netherlands. But as a relative newcomer to the European market, it is not as well known as other major credit card companies and hopes to increase the company's recognition with the launch of Mobile J/Speedy™.

“Currently, there is a lot of interest in mobile payment” said Hajime Matsuura, Branch Manager of JCB International branch in Amsterdam, who is responsible for Benelux, “so the timing for our launch of Mobile J/Speedy™ was perfect. Developed by JCB, the Mobile J/Speedy™ concept draws on our experience of contactless technologies in Japan. We hope it will be a great opportunity to explore the small transaction payment environment in this market. In addition, we are bringing together key players from the European banking, telecommunications and technology sector to help establish Mobile J/Speedy™, which is based on NXP's NFC technology, as a new global mobile payment infrastructure.”

“NFC technology is being driven very successfully by NXP,” added Michel van Bommel, Amsterdam branch's Operations and New Business Manager. “They have extensive technical know-how that has been invaluable for developing Mobile J/Speedy™. NXP not only provided us technical support, but has also been very helpful in answering the technical questions from our other partners.”

JCB selected Amsterdam's World Trade Center (WTC) for the launch of the project, where a number of Japanese companies are located and hence a large resident Japanese population. Most of the pilot users would thus be familiar with contactless payment – widespread in Japan – and importantly already be JCB cardholders. It is also the location of JCB International's Amsterdam branch, making it the ideal location for evaluating how the project is progressing and see customers' reactions.

In the first phase of the project, 100 existing JCB cardholders have been given mobile phones equipped with NFC chips and running the JCB payment application. Michel van Bommel explains, “The Mobile J/Speedy™ system allows customers to make small-value credit payments at merchants in and around the World Trade Center. Simply by waving their phone near the contactless payment terminal, they can pay for meals and other services.

Initial feedback from people taking part in the pilot has confirmed JCB's hopes for its solution. “The benefits of Mobile J/Speedy™ speak for themselves,” Michel said. “Customers are very happy with the speed and convenience of the service, all from a single, integrated device that also looks ‘cool’ – a brief flourish of your phone to register payment does carry a certain style! Being a true credit card solution gives cardholders extra flexibility as there is no need to recharge like e-purse solutions. There are even rewards for using it as we offer loyalty points, in the form of air miles, as part of the service agreement.”

As the trial in Amsterdam continues, JCB and its partners intend to go to the next step soon, turning the pilot project into the first phase of the European roll out of the Mobile J/Speedy™ service.

For more on NFC: [www.nxp.com/products/identification/nfc/index.html](http://www.nxp.com/products/identification/nfc/index.html)

Based in Berlin, Germany, Bundesdruckerei GmbH delivers complete identification system solutions for large scale projects. Having launched the German ePassport system in November 2005 and the first successful project using EAC (Extended Access Control) with NXP this summer, Bundesdruckerei aims to grow its international business as global demand for ePassports increases. >

# Partner Perspective



Bundesdruckerei has been producing ID cards for Germany since 1987 and passports since 1988. But its product portfolio is more extensive: security cards, postage stamps, electronic publication systems and Euro bank notes. In 1994, it expanded its secure document business to include other countries and has produced more than 200 million passports, ID cards and driving licenses to date.

Key amongst the Bundesdruckerei's product portfolio, the German passport is recognized as one of the most secure travel documents in the world. It incorporates many optical security features including Bundesdruckerei's patented Identigram®, multi-colour line patterns and watermarks. The new ePassport further enhances these tried-and-tested security features with the additional electronic security offered by the smart card chip.

#### **Privacy and data protection**

The German passport's high level of security is at least in part due to German citizens' concerns over privacy and particularly protection of personal data. This is also true for a number of other European countries like the United Kingdom, and also in the USA. To address these concerns a number of initiatives have been undertaken to ensure the security of personal data stored on electronic identification documents. The Basic Access Control (BAC) and Extended Access Control (EAC) standards for European ePassports are a result of these initiatives, and Bundesdruckerei was closely involved in their development.

The EAC standard, which will be adopted across the European Union by 2009, includes extra biometric data (fingerprint). While all data on the chip is securely protected against unauthorized access, the fingerprints are protected by a special extended control system. This ensures that the personal data stored on the ePassport is kept under the control of the user and protected in case of theft.

Recently, the cooperation between Bundesdruckerei, NXP and T-Systems resulted in the world's first real-world application of cards with EAC. The trial took place at the 'Adidas – world of football' event

in Berlin during the FIFA World Cup, with almost 2,000 biometric cards handed out to employees. More than 22,000 verifications were successful, which meant only authorized staff had access to the stadium. The cards were based on NXP's SmartMX chip technology, which really proved itself by delivering the reliability, security and performance critical for privacy-sensitive ID applications.

"As the first real implementation of EAC, this was a tremendous success for all companies involved", says Iris Köpke, spokeswoman for Bundesdruckerei.

#### **Future of eGovernment market**

Bundesdruckerei expects an annual production of around 2 million German ePassports. In addition, with many other countries planning to issue ePassports, it is also looking to supply ePassport systems to the international market.

Chip and biometrics-based passports and ID cards, currently planned by all 189 ICAO member states, will continue to be the key market driver. Border control, airport trusted-traveler programs and access control will be the main applications for the coming years. However, in the longer term, electronic components will be integrated into all official documents, and finger and face will become the dominant biometric features.

This wide distribution of chip-based official documents will lead to these documents being used to confirm our identities in the virtual world. Qualified signatures for digitally signing documents will become just as much an everyday occurrence as classic, hand-written signatures on a printed document.

For more on SmartMX: [www.nxp.com/products/identification/smartmx](http://www.nxp.com/products/identification/smartmx)



# 100% ICODE

## making a statement in the fashion world

Earlier this year, Lemmi Fashion became the first manufacturer to rely entirely on an RFID tagging system based on NXP ICODE, tracking its clothing inventory from production to shipment.



From idea to fully operational system, the project was completed in record time and is already showing a return on investment. Today, the company is supporting RFID implementations with its retail partners – and the CIO is accepting invitations to talk about this success at conferences all over the world.

Based in Fritzlar, Germany, family business Lemmi Fashion makes a range of children's clothing in a broad variety of sizes, styles and colors. The company owes much of its success to this wide variety, but it does create an astonishing variety of Stock Keeping Units (SKUs). With around 1,000,000 items per year and an average of 12.5 items per SKU, that means an annual total of around 80,000 SKUs. Lemmi CIO Götz Pfeifferling said, "When losing track of a single item can mean as much as a 25% drop in stock, it's clearly important to have an efficient method of inventory control."

Looking to solve its particular inventory tracking needs, Lemmi had tried a barcode system during the 90s, only to find it even slower than manual

checks. Then, at the end of 2004, the ideal solution presented itself during a visit to the RFID Solution Excellence Center in Graz, Austria, operated by RF-iT Solutions. Lemmi was so impressed by a demonstration of RFID for SCM applications that they quickly made the decision to implement RFID in their own supply chain.

Implementation began in February 2005 and the completed system, which also involved goods being tagged by manufacturers in Asia and Poland, was up-and-running by April 2006. The system was implemented by system integrator RF-IT and used NXP's ICODE-based labels from Checkpoint.

It is now being used extensively throughout the company, with decisions from goods tracking to finance being made based on data captured along the supply chain. "Meeting the planned business case fully, it's even giving an early return on investment," said Götz. "It also reveals how many mistakes were being made before when we relied on manual checks! We've realized an 85% saving in shelf assignment and storage and a 60% increase for delivery assignment, along with completely eliminating any delay in knowing the status of incoming goods." Improvements for Lemmi have been across the board, ultimately resulting in higher quality service and greater customer satisfaction, leading to increased sales.

With the successful roll-out of the project, others are keen to find out how Lemmi did it. Götz has been invited to speak at a number of international conferences on SCM. Lemmi is also working closely with its retail partners, showing them how they can use Lemmi's RFID-labels to improve their own in-store operations.

For more on ICODE: [www.nxp.com/products/identification/icode](http://www.nxp.com/products/identification/icode)

Students in St Petersburg, Russia, can now use their International Student Identity Card (ISIC) on the city's public transport network. As well as providing access to the network, the MIFARE-powered cards offer holders savings up to 60% on their monthly ticket.



## ISIC card brings more benefits to students

As the world's first working system to incorporate a city transport ticket within ISIC Mifare 1K, the St Petersburg travel application makes ISIC an 'everyday use card'. It's a great example of applying contactless technology to a multi-service international card. It was the work of the ISIC-Peter collaboration, which includes the St Petersburg government transport committee, SUE Petersburg metropolitan, SUE Organizator Perevozok and ZAO Rosan Finance, a certified ISIC manufacturer in Russia.

In 2005, ISIC-Peter became the first organization in the ISTC (International Student Travel Confederation) to transfer card production to Russia and to incorporate MIFARE technology. As a result, all the cards for St Petersburg (about 50,000 now in use) were already prepared for the transport application. During 2007, ISIC-Peter plans to incorporate banking services into the ISIC to complement the identity, transport and discount functionality it already offers.

The ISIC-Peter card is based on NXP's MIFARE Standard contactless chip. Implementation of the contactless ISIC was helped by the fact that MIFARE Standard 1K cards are already widely used for the city's family of public transport solutions. This includes both standard contactless tickets together with student, social and bank cards that also feature the transport application.

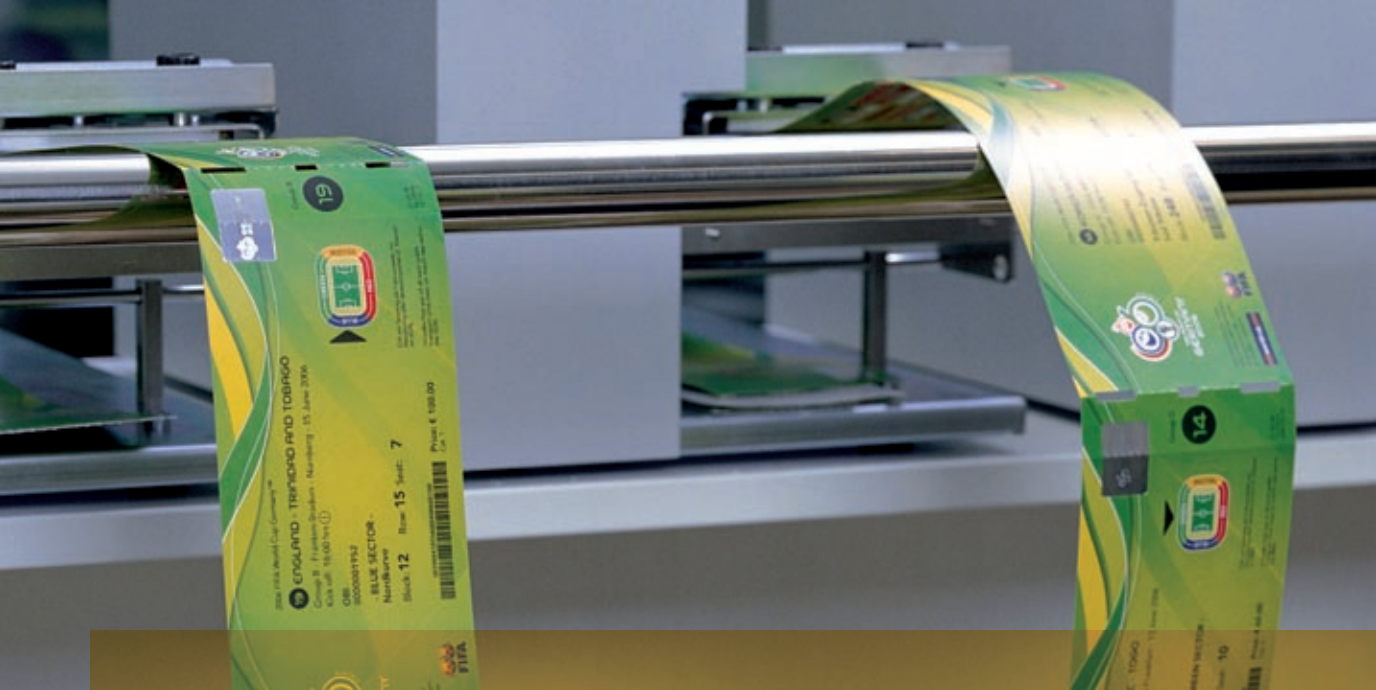
For more on MIFARE: [www.nxp.com/products/identification/mifare/](http://www.nxp.com/products/identification/mifare/)

### 3.5 million ISIC users

Issued by the ISTC, the ISIC is the only internationally recognized proof of full-time student status and provides access to worldwide benefits and services. Available to all students over the age of 12, ISIC is fully endorsed by the United Nations Educational Scientific and Cultural Organisation (UNESCO). There are currently 3.5 million ISIC holders around the world and about 50,000 in St Petersburg.

For more on ISIC: [www.isic.org](http://www.isic.org)





# The final whistle

The final whistle of the 2006 FIFA World Cup™ has been blown and Italy went home as champions. With millions of fans descending on Germany to sample the unique atmosphere, the tournament was a huge success. Supporters from across the globe agreed that this FIFA World Cup™ offered the best 'fan experience' ever.

All 64 games were completely sold out. That's some 3.2 million spectators. Yet all of those spectators could get into the stadium with minimal waiting and fuss. And that was down to the fast, reliable electronic ticketing system – based on our MIFARE platform.

Closely involved in defining the eTicket solution, we helped draw up the specifications and processes. We also handled key stages of the project management and acted as consultants to the Local Organizing Committee and the individual stadiums. In addition, every ticket had one of our MIFARE Ultralight ICs inside.

## Official approval

Embedding smart card chips in the tickets made it virtually impossible for people to gain entry without a valid ticket. According to Horst R. Schmidt, vice-president of the Organizing Committee, several thousand invalid entries were blocked. "With our

electronic ticketing system, this tournament set a new benchmark for public viewing," Horst noted. "It enabled us to reduce forgery and control access without increasing waiting times."

The German government was likewise impressed with the electronic ticketing system. In its official response to questions raised in the German parliament, it stated: "The successful deployment of this technology at the FIFA World Cup™ shows electronic ticketing is clearly suited to large-scale events of this kind and delivers very high security levels."

With electronic ticketing now proven on a large scale, lessons learned during the FIFA World Cup™ will be used to raise the standards even higher in upcoming major sports events like the Beijing Olympics in 2008.

For more on MIFARE: [www.nxp.com/products/identification/mifare/](http://www.nxp.com/products/identification/mifare/)



# Identification updates

## NFC Forum issues first four specifications

The NFC Forum has released its first four specifications. These documents will help manufacturers create NFC-compliant devices that are interoperable with other manufacturers' applications and compatible with conforming services from providers.

- **NFC Data Exchange Format (NDEF)** – specifies a common data format for devices and tags. It also contains the rules for constructing a valid NDEF message and defines the mechanism for specifying the types of application data.
- **NFC Record Type Definition (RTD)** – specifies standard record types used in messages between two devices or between devices and tags, ensuring interoperability in a broad variety of devices.
- **NFC Text RTD** – for records containing plain text that can be read by devices. It can be used for adding metadata to things such as Uniform

Resource Identifiers (URIs), and will also work well for non-Western languages as it includes language information for localization purposes.

- **NFC URI RTD** – describes a record used with the NDEF to retrieve a URI stored in a tag, or to transport it from one NFC device to another. It also provides a way to store URIs inside other NFC elements including smart posters.

NFC Forum Chairman Christophe Duverne, NXP Semiconductors, said, "Issuing the first four specifications signifies a huge step forward in creating the framework necessary to make NFC applications a reality and put NFC capabilities in the hands of consumers around the world."

For more information on the NFC Forum: [www.nfc-forum.org](http://www.nfc-forum.org)

## Paper-thin electronics for paper applications

NXP is the industry's first volume supplier of 75- $\mu\text{m}$  wafers. Half the thickness of the current industry standard, these new thinner solutions target emerging 'electronic paper' documents.

As eGovernment applications become more common, so do IC-based paper documents such as ePassports and eVisa stickers. However, the electronic components used in such applications must be thin enough to be placed into or onto a sheet of paper. This challenge has led to the development of significantly thinner IC delivery types such as the MOB6 contactless package.

Only 250  $\mu\text{m}$  thick, the MOB6 is 20% thinner than existing solutions. Furthermore, as a member of

the MOB contactless package family, it is also fully outline-compatible with the MOB2 and MOB4 packages already in volume production. This ensures a seamless integration of the new package into existing production environments without any additional investments.

However, a thinner package does require a thinner chip inside, especially since most of today's semiconductor wafers are 150 or 180  $\mu\text{m}$  thick. With a € 2 million investment in new technology, NXP is now producing chips that are just 75  $\mu\text{m}$  thick – thinner than a human hair. This thickness represents the ideal compromise for meeting the application requirements of eID documents while also maintaining the highest possible yields in wafer production and module assembly.

# Meet us at the following events

Event: **CARTES**  
Date: 7 - 9 November, 2006  
Location: Paris, France  
Website: [www.cartes.com](http://www.cartes.com)

Event: **GovWare**  
Date: 21 - 23 November, 2006  
Location: Singapore  
Website: [www.governmentware06.com](http://www.governmentware06.com)

Event: **OMNICARD**  
Date: 17 - 19 January, 2007  
Location: Berlin, Germany  
Website: [www.omnicard.de](http://www.omnicard.de)

[www.nxp.com](http://www.nxp.com)

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