



Business News from NXP

Moscow Metro: the World's First Major Transport System to operate fully contactless with NXP's MIFARE Technology

300 million MIFARE Ultralight-powered smart paper tickets issued in the Moscow underground to date

Eindhoven, The Netherlands, January 26th, 2009 – NXP, the independent semiconductor company founded by Philips, today announced that the Moscow underground is the world's first public transport system to run a 100% contactless automatic fare collection (AFC) system based on MIFARE technology. Moscow Metro is one of the most heavily used public mass transport schemes in the world, carrying on average nine million passengers per day, and standardizing on MIFARE has helped improve the overall passenger experience and drive operational efficiencies.

The Moscow Metro AFC system, implemented by system integrator Smart Technologies Group, has extended its existing smart card based electronic ticketing solution in the beginning of 2008 by replacing the magnetic stripe tickets for 1,2 and 5 trips with smart paper tickets based on MIFARE Ultralight ICs to serve ad hoc users. Since the introduction Moscow Metro has sold over 300 million tickets within one year.

The MIFARE-based system provides Moscow Metro with a variety of benefits compared to traditional paper or magnetic stripe tickets, such as increasing the performance of the terminals at the checkpoints and improving travellers' convenience. Since the introduction of the system, Moscow Metro has been able to reduce the level of fraud by an order of magnitude as well as significantly drive down maintenance costs and operational expenses.

"Moscow Metro has been driving transport innovation since we first deployed smart card technology in 1999 and is proud to run the first entirely contactless ticketing system in the world. We have continually evolved our system based on the latest NXP technology", said Vladimir Zhuchkov, director Fare Collection Department, Moscow Metro. "Smart paper tickets provide passengers with a simple, hassle-free journey across the entire Moscow Metro network providing the perfect solution for journeys."

Electronic paper tickets are the ideal replacement for conventional single trip-ticketing in public transport based on magnetic stripes, paper tickets or coins. The MIFARE Ultralight IC provides operators with a cost-effective solution for smart paper tickets based on the worldwide leading MIFARE technology for contactless AFC systems. It not only reduces queuing time and enables quicker boarding and exiting for all passengers but also offers a more robust system and easy upgrade capabilities for transport operators.

"Moscow Metro's AFC system, based on NXP's family of MIFARE family of chips is a strong international reference of how innovative transport operators are benefiting from contactless technology compared to traditional ticketing systems based on paper and magnetic stripes. These systems offer a clear return on investment for operators and also significantly improve the traveling



experience for passengers”, said Henri Ardevol, general manager, automatic fare collection, NXP Semiconductors. “MIFARE Ultralight provides a flexible, easy to use and reliable chip solution for electronic smart paper ticketing in public transport, as well as for other cost-sensitive contactless applications such as event ticketing.”

MIFARE Ultralight is certified to the ISO 14443A standard, is fully compatible with the existing MIFARE infrastructure and can be easily integrated into existing schemes.

About NXP Semiconductors

NXP is a leading semiconductor company founded by Philips more than 50 years ago. Headquartered in Europe, the company has about 33,500 employees working in more than 20 countries and posted sales of USD 6.3 billion (including the Mobile & Personal business) in 2007. NXP creates semiconductors, system solutions and software that deliver better sensory experiences in TVs, set-top boxes, identification applications, mobile phones, cars and a wide range of other electronic devices. News from NXP is located at www.nxp.com.

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Forward-looking Statements

This release may contain certain forward-looking statements with respect to the financial condition, results of operations and business of NXP and certain plans and objectives of NXP with respect to these items. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and there are many factors that could cause actual results and developments to differ materially from those expressed or implied by these forward-looking statements.

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