

IBM payment solutions



The statistics tell the story of a revolution on the streets



There are 140 million cards in Britain, 92% of which use chip and PIN technology, rather than the old-fashioned signature system. A total of 850,000 UK tills – nearly 90% of the total – have been upgraded to take chip and PIN cards – and, significantly, the latest figures showed fraud on lost and stolen cards down by 24% in a year as the new-style cards were rolled out. That's a saving of nearly £60 million.

Chip and PIN has already set new standards of security for retailers, customers and banks alike, and opened new possibilities of speed and efficiency. It is trusted by shoppers, supported by the banks, and embraced by the vast majority of the retail industry.

But the revolution is only just beginning...

Technology

IBM technology was at the forefront of the introduction of chip and PIN, and IBM's EPS solution, StorePay and SureSwitch applications offer payment solutions that will take retailers confidently into the next stages of development.

EPS

EPS is a fully integrated electronic payment system solution designed specifically for users of IBM Supermarket Application and IBM General Sales Application. It provides a total solution for credit and debit card processing, offering a mature platform for all standard card payments. Retailers can incorporate their own additional card processing needs – for example, mobile phone top-up and gift card provision. EPS supports a wide variety of communications interfaces to central card processing switches, providing the flexibility that major retailers require.

StorePay*

StorePay controls payment transactions on the chip and PIN device, validating the card against retailer-defined rules and performing all actions required to complete a payment. It offers a number of different integration options to suit the widest range of points-of-sale installations in retail, hospitality and speciality sectors to obtain authorisation for a transaction, StorePay can process the payment on the spot or communicate either with a central switch or directly with the bank using industry standard messages.

SureSwitch

SureSwitch is a central authorisation host and settlement system for electronic funds transfer (EFT), cheque guarantee and gift cards. It encompasses financial and performance monitoring presented to users through a Web-based interface. SureSwitch can be used with EPS, StorePay or other third-party applications if required.



These applications can be used together or separately. With the backing of IBM's established technological systems, they can provide a range of flexible payment solutions. Speed and efficiency for the shopper mean shorter queues, and a faster throughput of custom for the retailer; detailed control and analysis of the use of cards offer companies important information to help them plan their business; and faster and more secure settlement with the banks translates into higher profits and fewer disputes.

Crucially, StorePay and SureSwitch are future-proof. They offer the opportunity for retailers not just to use the latest payment technology of today, but also to keep up with developments over the next few years that will bring new efficiency, new security and new opportunities.

Changes

Today... IBM payment solutions will be fully compliant with Payment Application Best Practices (PABP), from the beginning of 2007. PABP are the parts of Payment Card Industry Data Security Standard (PCI/DSS) which affect the payment application. IBM payment solutions comply with EMV level 2 and APACS guidelines. IBM is at the forefront of ensuring that its payment solutions are kept up to date and adhere to the industry standards.

IBM's payment solutions make each payment at the point of sale faster and more efficient.

Whether transactions are made in-store, online, through self-service kiosks or by mobile phone, IBM solutions combine control and flexibility for the retailer with the opportunity for detailed analysis of transactions and for rapid problem-solving.

Vending, self-selection, self-scanning, personal shopping assistants (PSAs), self-checkout, kiosks and Web sites can all be linked simply, quickly and seamlessly to loyalty and reward programmes – turning occasional customers into regular ones.

IBM solutions cover the whole retail process, not just the final payment transaction. IBM's extensive experience across the retail industry, coupled with the specialised expertise of its niche business partners, mean it can provide an end-to-end service from back-office to front counter, to cover every aspect of retailing.

Visa and MasterCard agreed on an international standard for the issuing and accepting of chip cards. These standards were named EMV, and are managed by a joint group known as EMVCo. It is administered in parallel to PABP, which is an assessment of the design and implementation of payment software.



For the future... The smart card – the intelligent credit card – is the key technology behind the payments revolution. It is the brains behind chip and PIN, StorePay and SureSwitch. IBM's business partner Smart Technology Solutions Limited (STS) has provided a smart card processing engine, SmartNS, which will accept a variety of plug-in software modules. Chief among them is Emvelink, an EMV-approved kernel for chip and PIN, which enables IBM to provide a wide variety of payment solutions.

The flexibility and adaptability of the technology means the potential applications of the smart card are almost endless.

Research is pressing ahead into new ways of bringing small payments under the credit card umbrella. Within the next twelve months, so-called 'contactless' cards will encourage customers to pay for small items like cups of coffee, newspapers or confectionery with a flick of their cards. Shoppers simply hold the card close to a reader – like Oyster cards in the London Underground – and the money is debited from their account.

New developments bring the mobile phone right up to the point of sale, giving customers the opportunity to pay bills at the bar or the checkout with a text message.

By tackling the problem of high-cost, low-value shopping transactions, payment solutions will be able to improve efficiency and profitability. This new technology is right around the corner – and as the cashless society approaches, IBM's existing and new customers will already be equipped to take advantage of it.

Increasingly, payment solutions will be able to target special offers and loyalty schemes to individual customers, by linking the point of sale to the customer's own account history. Such applications are likely to be in shops by the end of 2007.

IBM is also involved in research into biometric verification of cards, using fingerprints, voice prints, and iris scanners. Digital signatures, recorded and verified on a computer screen, are already in common use in the US.

IBM offers a bespoke service that aims to create a solution specific to each client. The solutions also include full integration and accreditation services giving clients the confidence that the complex project can be managed effectively.

IBM's payment solutions can provide the latest technologies today.



Experience

IBM's experience, which has been built up since it began the modernisation of the point-of-sale experience more than 30 years ago, covers every type of transaction in every type of retail unit. This understanding leads to an appreciation of what is involved in dealing with customers face-to-face – the concerns they have for reliability, security and efficiency. It also means that IBM is aware of the different priorities of the different areas of the industry.

The hospitality sector, where customers may settle their bills at their table or at the bar, or may pay in advance at the hotel reception desk or over the phone, where they may wish to offer gratuities or to ask for cash-back with their bills, may require a system that can deal with cash, cheques, cards and other forms of payment, and also integrate a variety of mobile readers into a single point-of-sale computer. IBM's tailor-made solutions can provide that flexible system.

Other types of business have other requirements. At Waterstone's, as part of the chip and PIN requirement, IBM implemented an EPS solution at the point of sale, and the SureSwitch payment solution at the centre. Since the project started in 2003, IBM has taken on the management of the company's SureSwitch environment, along with that of HMV.

The IBM team managed the integration of EPS and helped with the accreditation process with the banks. Waterstone's has since signed three-year support contracts for EPS and SureSwitch.

"Once we had reviewed the marketplace for chip and PIN solutions, it was clear that IBM stood head and shoulders above the rest," says Ed Rhodes, Waterstone's retail project manager. "IBM has a strong track record in delivering quality EFT solutions for retail. We selected SureSwitch and the IBM EPS product in early 2003, and since then it has provided us with the flexibility and stability we needed – this is testament to the quality of IBM's central switch product and the cross-platform support that they are able to give."

IBM, with its network of specialist business partners, combines overall experience with sector-specific expertise. Payment solutions are available for in-store counter transactions, for kiosks, for self-service and for telesales. Crucially, IBM understands the need to minimise the effect of changes on the customer, and its services include full integration and accreditation of the system.

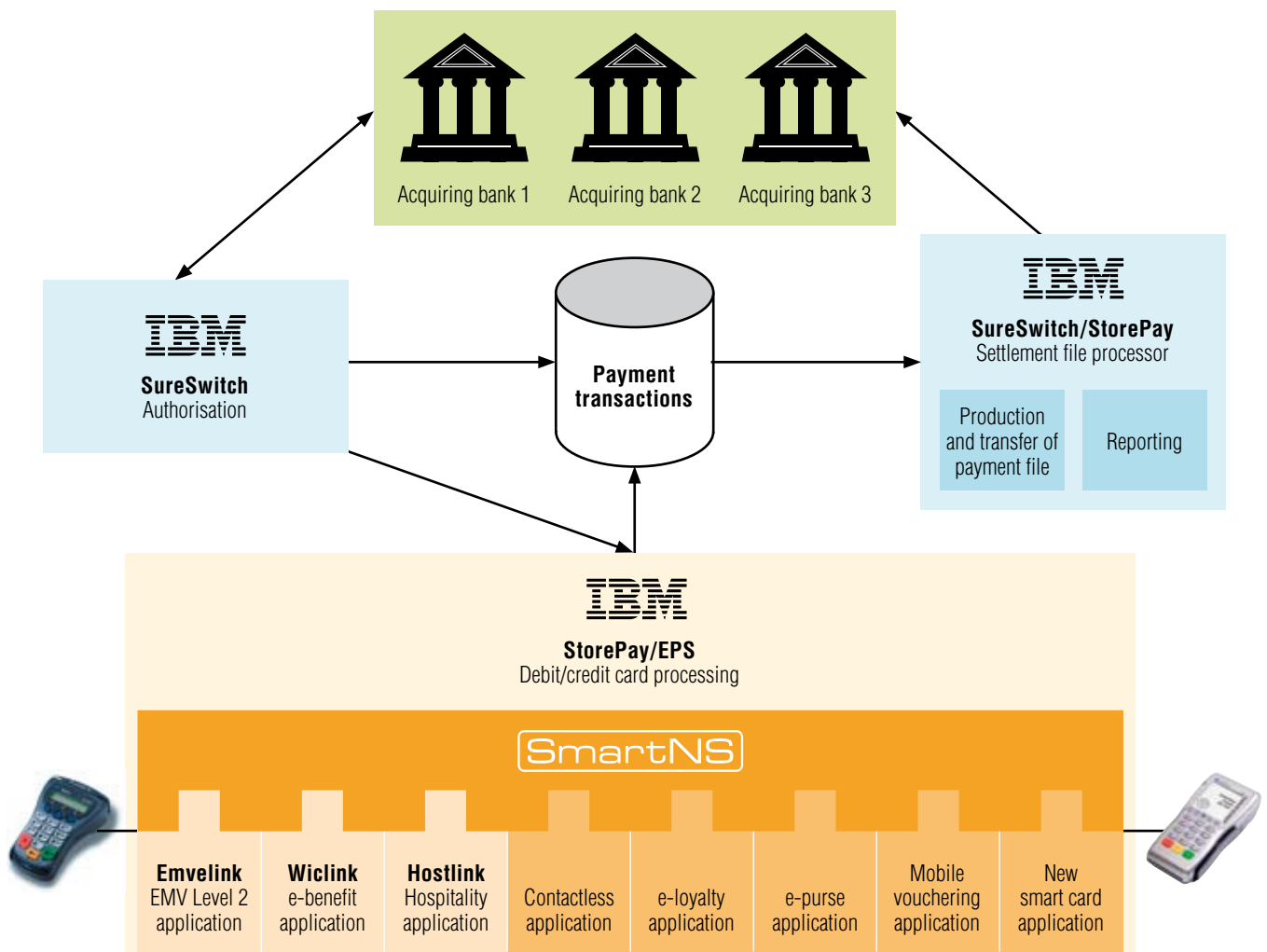
Simplicity

StorePay and SureSwitch combine sophistication in their application with simplicity in their use. Tens of millions of transactions every day across the UK bear witness not only to the reliability of the system, but also to the ease with which retailers and their customers understand it and use it. A well known supermarket chain alone clocks up a regular 750,000 card transactions a day, often involving up to £30 million.

The systems offer immense flexibility of scale, so that clients can start small and allow their payment solutions to grow as their business and their requirements develop. StorePay and SureSwitch can run in many different environments.

PIN pad reader hardware from all the major manufacturers can be used. The open approach to software engineering of STS has enabled IBM to develop a well known loyalty card processing module as a SmartNS 'plug-in'. The module shares the smart card reader with chip and PIN, reducing costs and saving space at the point of sale.

The 'plug-in' approach means that new technologies such as contactless cards, smart loyalty schemes, and both global and bespoke e-benefit systems can be deployed simply and without fuss. One recently developed 'plug-in', Hostlink, targets the hospitality market in an innovative way, by extending the point-of-sale interface to the customer. Bills can be printed and paid at the table, not only with plastic, but also with cash, cheques and vouchers.





With IBM's solution partner, Transaction Network Services (UK) Limited, providing the interface between the retailers and the banks, the systems interact with all the major acquiring banks in the UK and Ireland. IBM is working towards a solution that will bring together the different standards across Europe. Other partners include VeriFone and Ingenico, who manufacture the payment devices.

Simplicity also means technical adaptability. StorePay can operate on Linux** and various Microsoft** Windows** platforms, and SureSwitch on AIX* 5.3 and Linux SLES 9 and above. IBM's technical adaptability means that payment solutions are available on devices such as point of sale, mobile point of sale, kiosks and banking interfaces.

Strength and support

IBM speaks the language of business. It is trusted by the banks. It has wide experience of the retail industry that goes back to the days of the standalone cash till – back, almost, to the days of pounds, shillings and pence in the UK.

Today, StorePay and SureSwitch may be among the smallest applications that a company has on its computer system, but because they ensure the smooth flow of cash from the customer to the bank, they are at the heart of any retail business. Any business that deals with paying customers – whether in shops, supermarkets, bars, clubs, or restaurants – needs the strength and support of a specialised payment solutions provider behind it.

IBM's payment solutions are reliable. They are efficient. And by bringing smart card technology to their customers, they offer tomorrow's new answers to tomorrow's new questions.

Why IBM?

IBM is the world's leading specialist in providing retail solutions. The company draws on an unrivalled range of skills from across the organisation, delivering all the expertise in one package.

IBM managed and implemented the chip and PIN programme across the UK. It is a significant player in the electronic funds transfer at point of sale (EFTPOS) market across the world.

IBM has evaluated the marketplace and builds solutions using the products and services of the industry's best open suppliers. It can provide a fully integrated solution, with the reassurance of accreditation, maintenance and continuing consultancy services.

IBM has an enviable reputation in the field of payment solutions – as our examples show.

For any large company, changing payment systems is a major commitment, but Waterstone's, the Co-operative Group and some of the leading names in British retailing have done just that.

Over the counter or over the phone; linking mobile card readers to store computers, store computers to head office networks, and head offices to banks and card acquirers – IBM payment solutions are helping to run the finances and settle the bills of the major players in British retail.

The Co-operative Group

StorePay was installed to communicate directly with the Co-operative Group's acquirer, and the settlement file processor was set up to handle up to half a million transactions every day, consolidating them centrally and forwarding them to the acquiring bank.

"Integration between our existing systems and the IBM software was totally seamless," says Stephen Garner, head of store solutions at the Co-operative Group. "It has produced a significantly faster payments service than we had ever experienced before."



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More details about IBM payment solutions and systems can be found in IBM Global Business Services' white paper, 'Store-back Operations – Tackling the store operations dilemma'.

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