

**Welcome to next
generation payment, now!**



A Guide to XLS®

May 2004

Welcome

Surprise and delight your customers with your enhanced payment card.

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Introduction

Who we are

"Enhanced payment software that makes your card irresistible"

Welcome (www.welcome-rt.com) is the world's leading provider of enhanced payment software. Financial institutions, retailers and card associations across the world depend on Welcome's smart transaction platform to boost their revenues with services such as instantly awarded loyalty points, coupons, punch cards, vouchers, tickets, cash back, etc., all integrated within a single convenient payment process. With over a hundred implementations involving millions of cardholders and thousands of merchants worldwide operating the company's software, Welcome has proven repeatedly that its easy-to-deploy solutions generate higher sales for its clients while increasing their customers' satisfaction and loyalty. Welcome is headquartered in Aix-en-Provence, France, with offices in Phoenix (USA) and Singapore.



"Getting the most out of your migration to EMV"

EMV is a payment card standard driven by Europay, MasterCard and Visa, developed to help reduce fraud, thanks in large part to the chip's ability to verify the customer's PIN code instantly when a purchase is made. Banks are finding that EMV can offer much more than fraud reduction. All EMV cards today allow additional data to be processed by the chip in addition to fraud prevention data, which allows for a wide range of payment enhancement features to be supported. Even the most basic EMV cards can provide enhancements to the payment transaction, such as immediate calculation of points, easy redemption of rewards directly at the point of sale, instant delivery of promotional offers and other events which occur at the time of purchase.

Welcome's XLS® software is designed to boost the use of payment cards by allowing the card to store, process and deliver the electronic equivalent of targeted incentives like points, coupons or punch cards, all in a single convenient payment process.

The system makes the **issuer** more competitive by adding value to the card and getting customers to use it more often - to privilege their card over others in the customer's wallet.

The merchant **acquirer** can recruit new merchants and differentiate on added-value services rather than aggressive pricing.

It makes the card attractive to **consumers**, who can get rid of the loyalty cards and coupons stacking up in the kitchen or making their wallets fat.

The instant reward feature allows the **merchant** to save on traditional operational costs and to interact in real-time at the time of purchase. In addition, it gives retailers a competitive reason to invest in chip-enabled terminals by drawing customers back using a reliable, automated loyalty program.

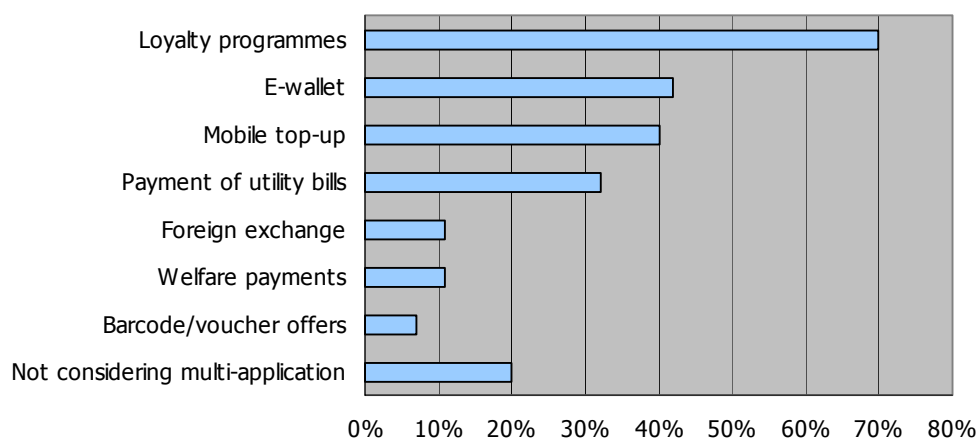


Introduction

Trends in the Payment Market

A recent market survey performed by Finextra Research shows that EMV migration is perceived by many banks to be a unique opportunity to create added-value applications which will help them differentiate their card products and, at the same time, increase the return on investment from EMV deployment. **70% of banks chose loyalty** as the main business driver and a key element of their differentiation strategy.

Added-value applications banks intend to offer



Source: Finextra Research, January 2003. Survey of banks in Europe and the Middle East.



Introduction

Trends in the Payment Market



There are 3 main reasons that the most compelling application is customer loyalty

- The payment industry is characterized by an increasing number of players, little differentiation among card products and significant pressure to continue reducing costs. As a consequence, banks and financial institutions are looking more and more to differentiate their products and services as a way to maintain existing cardholders, increase spending and attract new cardholders. Processing loyalty points directly at the point of sale is a powerful enhancement to the payment function. Customers can be informed of their points balance directly on their credit card receipt, without the cost of sending statements by mail. More importantly, customers can use their points at the point of sale to pay for purchases. This eliminates the high cost of maintaining a catalog of reward items, keeping the rewards stocked in a warehouse, processing requests for rewards and sending the rewards by mail to customers. With an enhanced payment function, customers can enjoy their rewards whenever they like, instantly.
- Of all the applications available for chip cards, those which process points and promotional rewards are closest to the pure credit, debit or e-purse payment function. These applications do not modify the customer experience at the time of payment. Little additional infrastructure is needed and little further education for cardholders and merchants is required. At the same time that payment is processed, the payment enhancement application runs transparently to improve the customer experience at the point of sale. The customer's card is inserted in the payment terminal, the amount of the transaction is keyed in, and the credit card receipt is printed, including payment information as well as the customer's points balance, special promotional messages and any other enhancements offered by the card issuer and the merchant.
- Payment enhancement features are generally available at a relatively small incremental cost on top of the cost to migrate to EMV. Because payment enhancement data is already easily available within most EMV cards, banks can choose to use either low cost "single-application" EMV cards or the more sophisticated "multi-application" cards. Recently deployed projects demonstrate that for every \$100 spent on upgrading a bank's card, terminal, processes, systems and support infrastructure to EMV, as little as an additional \$2 to \$5 is needed to add payment enhancement features.



Payment Enhancement Features

Product Overview

"A wide variety of payment enhancement features"

XLS® is a flexible platform that helps banks and financial institutions create innovative enhancements to their payment products and services.

XLS® offers a wide variety of payment enhancement features which are relevant across the entire business process, from issuing and acquiring activities to operations and marketing.

XLS® includes the following modules:

- **Real-time Rewards:** provides new ways to differentiate any payment card by making new reward programs **instantly** available to the customer at the point of interaction, such as welcome gifts, surprise bonuses, personal reminders, targeted samples, loyalty points, electronic or paper coupons, punch cards, vouchers, tickets, cash back and more, all in a single convenient payment process. Delivery and redemption of rewards is available immediately at the point of sale.
- **Real-time Engines:** an exclusive innovation called "Real-time RFM" (patented by Welcome) allows customers to be recognized at the time of transaction based on how **R**ecently they last shopped at a specific store or chain, how **F**requently they shop there and their cumulative **M**onetary spending. Other modules including a **generic** engine and **event** based rewards are also available.
- **Segmentation:** customers, or groups of customers, can be recognized and rewarded based on similarities or profiles. Rewards can also be assigned using **Geographical** segmentation or **Network** segmentation.
- **Channels:** XLS® provides a way to create and manage new channels of communication with cardholders in real-time through several points of interaction. In particular, XLS® provides a more efficient use of the current payment infrastructure, such as POS devices, kiosks, or ATM's, to instantly deliver information to the cardholder.
- **Data / Reports :** XLS® has the ability to feed any CRM application on a daily basis with key data on customers, merchants, campaigns, etc. This helps banks and financial institutions "close the loop" through analysis, modeling, segmentation and rewards program re-engineering.
- **Interfaces :** A key element for any successful implementation is the ability to integrate XLS® with different applications (Credit, Debit, Card Management System, CRM) and platforms (Servers, POS). XLS® includes several built-in interfaces and customer specific interfaces can be created for additional applications, platforms and legacy systems.



Real-time Rewards

XLS® provides 5 real-time reward modules

that can be targeted in order to enhance the cardholder experience while paying and to change customer expectation:

- Points
- Cash Back
- Discount
- Paper Coupons
- Electronic Coupons



Multi-rewards programs allow banks and financial institutions to create new portfolio dynamics.

POINTS & CASH BACK MODULE

- **Points** are promotional currency obtained at the point of sale (POS) or over the Internet. Points can be exchanged for gift vouchers, goods and services at designated merchants or redeemed as partial payment. Card issuers can create a **common pool of points** to be “earned and burned” in real-time at participating merchants. In addition, merchants can create **private pools of points** allowing them to define their own bonus points scheme.
- **Cash back** schemes are a popular method to replace or enhance traditional points or air miles programs. The cardholder has the ability to collect real cash-back in the chip for later redemption at the point of sale. **Common cash back** (redeemable across all participating merchants) and **private cash back** (redeemable at selected outlets) can be used in the same payment card.

Award rules:

- Points or cash back can be awarded as a **percentage of the purchase amount** (e.g. “Get 10% of your purchase amount as points”),
- Points or cash back awarded as a **fixed amount per transaction** (e.g. “Get 10 points for every purchase”),
- Points or cash back awarded as a **fixed amount per cumulative spending** (e.g. “Get 10 points for every \$50 spent”).

Redemption rules:

- **A complete balance of points** is redeemable, with no upper limit on the number of points which can be redeemed per transaction,
- **A fixed number of points** is redeemable per transaction,
- **A minimum balance is required** before redemption is allowed.



Real-time Rewards

DISCOUNT MODULE

A **discount** is an **automatic** and **instant reward** based on **RFM parameters** and obtained at the POS. The discount is immediately and automatically generated and given to the customer without any action from the merchant or customer.

Award rules:

- A **percentage discount** of the purchase amount (e.g. "Get a 10% discount at your first visit")
- A **percentage discount per cumulative spending** (e.g. "Get a 10% discount after \$100 spent, then a 20% discount after \$500")
- A **fixed amount discount per cumulative spending** (e.g. "Get \$5 for every \$50 spent")

PAPER COUPON MODULE & e-COUPON MODULE

Punch cards & coupons are a perfect example of the types of programs that can be migrated to smart payment cards. Franchise chains and smaller retailers typically use loyalty cards that are punched or stamped at each visit, offering a free product or service to frequent customers.

These programs can migrate to smart card technology using RFM behavior data. By storing distinct RFM behavior parameters for each punch card, a smart payment card can easily carry dozens of programs with little memory overhead.

Coupons can simply be printed on the payment receipt or electronically stored in the chip card's memory. Cardholders obtain **electronic coupons** directly at the time of payment, at in-store kiosks or by clipping them from Internet PCs. Coupons stored in the chip are removed automatically when redeemed at the point of sale.

An XLS® coupon is:

- A **paper-based coupon** that is printed out by the POS terminal, with a unique identifier and a specific message describing the benefit (e.g. "Good for a free T-shirt").
- An **electronic coupon** where information describing the coupon is stored in the chip card's memory.

Redemption rules:

- **Manual redemption:** coupons printed at the terminal are redeemed "as usual, a simple solution for all merchants,
- **Paper redemption:** coupons printed at the terminal are redeemed "as usual" with an electronic track recorded in the terminal,
- **Paperless redemption:** scroll through e-coupons available in the card for redemption, a fully electronic solution,
- **Automatic redemption:** e-coupons can also be redeemed automatically, an integrated solution for merchants with PC-based POS systems (3% of stores worldwide).



Real-time Engines

XLS® provides 3 real-time engine modules:

- RFM
- Generic
- Event



As the rules for giving out rewards are managed on the card and in the terminal, the cardholder can take advantage of them immediately. Consequently, additional costs related to processing redeemed rewards are also eliminated.

RFM CAMPAIGN MODULE

A major new innovation allows **RFM** behavior data ("Recency, Frequency, Monetary value") to be placed directly in the smart card, where it can be dynamically updated at each transaction. Direct marketing software in the merchant's point of sale terminal interacts with behavior data in the card, so that targeted rewards can be provided to customers in real-time directly at the point of sale, for a very low cost.

Several RFM criteria can be used with XLS®:

- **Frequency of visits:** Customers are rewarded according to their number of visits over a given period of time (e.g. "Get a free hamburger at your 4th monthly visit").
- **Cumulative purchase amount:** Customers are rewarded according to their cumulative purchase amount over a given period of time (e.g. "From \$1 to \$500, get 10 points at your 1st purchase, then from \$501 onwards, get 20 points for any purchase").
- **Number of items:** Customers receive punches based on the number of a pre-defined item they purchase. Punches are manually entered into the POS by the merchant, and the customer is rewarded based on the number of punches he has accumulated. For example, a merchant promoting a specific soda will reward his customers according to the number of sodas they purchased as follows:
 - Punch awarding rule: 1 large soda = 3 punches, 1 medium soda = 2 punches, 1 regular soda = 1 punch.
 - Punch redemption rule: "Accumulate 50 punches and get a value meal for free".

An RFM campaign can manage up to 4 scenarios, each scenario managing its own delivery rules.



Real-time Engines

An **RFM scenario** defines:

- The range where the rule is applicable,
- The benefit to be awarded,
- The distribution condition of the reward among the 3 following:
 - **First transaction:** Benefits are awarded once only, i.e. the first time the scenario is activated (e.g. "From \$1 to \$500, get 10 points at your first purchase, then from \$501 onwards, get 20 points at your first purchase").
 - **Every transaction:** Benefits are awarded each time the scenario is activated (e.g. "From \$1 to \$500, get 10 points for every purchase, then get 20 points for every purchase").
 - **On every multiple of:** Specifies a qualifying step, where benefits are awarded at every multiple of this step (e.g. "From \$1 to \$1000 of cumulative spending, get a \$30 coupon on every \$300 purchase, then get a \$50 coupon on every \$500 purchase").
- Whether or not an award message is printed.



RFM data are organized in slots. Each slot is a record that is dynamically allocated to a particular merchant or chain when the card is first presented at that merchant's terminal. The merchant's RFM slot will remain active as long as the reference period has not expired. After expiration, the slot becomes available once again. The customer "chooses" which merchant slots are active simply by shopping regularly at those stores, and can "deactivate" slots by not shopping there anymore.

The **RFM data stored in the chip** can be reset as follows:

- **No reset:** RFM data are never reset during the validity period of the campaign,
- **Monthly reset:** RFM data will be reset the last day of the calendar month of the first transaction,
- **Fixed relative reset:** RFM data will be reset after a certain number of months starting on the date of the first transaction,
- **Rolling relative reset:** RFM data will be reset after a certain number of months starting on the date of every transaction.



Real-time Engines

GENERIC CAMPAIGN MODULE

This promotional campaign acts as an **instant transactional reward**: the customer is rewarded according to his current purchase.

A Generic campaign can manage a **basic level** and a **bonus level**, each level managing its own delivery rules. In both levels, the customer is rewarded as soon as the purchase amount exceeds a pre-defined amount threshold.

EVENT CAMPAIGN MODULE

The event module includes four types of campaign:

- **"Welcome" campaign**: This campaign awards benefits to the customer during a particular period starting at the first use of the card.
- **"Happy birthday/birth period" campaign**: This campaign is defined to award benefits to the customer as an instant reward, on his birthday date or a time period around his birthday.
- **"Happy day" campaign**: This campaign awards benefits to the customer on several days a year, previously defined on the server.
- **"Recurring happy day/hour" campaign**: This campaign awards benefits to the customer during specific hours on particular days of the week and/or of the month.



Segmentation

XLS® provides 3 segmentation modules :

- Geographical segmentation
- Network segmentation
- Cardholder/Card Profile



Geographical segmentation

The XLS® solution organizes the acceptance network in a hierarchical architecture, allowing the customized distribution of campaigns to a single terminal, a group of terminals or to all the terminals defined in the system.

The architecture used is the following:

- **Corporate:** a logical grouping of related Merchants (e.g. a shopping mall, a store chain),
- **Merchant:** the physical entity representing a retail outlet, a store,
- **Terminal:** hardware payment device residing at the merchant's location

This level of segmentation allows the **geographical assignment of campaigns**.

Network segmentation

The network represents the acceptance network where a card can be processed by XLS®. Network differentiation is established by only accepting at the POS, cards that belong to the proper network. All cards with other networks IDs will not participate in the enhanced payment system.

This level of segmentation allows a **card to be processed or not** on a terminal.

Card filtering segmentation

Card segmentation allows the differentiation of cardholders based on their card characteristics. In order to achieve this, the existing loyalty campaigns throughout the system are only used for specific card profiles, with weighted rewards (award "ratio"). Based on card information stored in the chip (**card profile**), card filters are designed and applied to the campaigns.

This level of segmentation allows a campaign to reward some cardholders and to differentiate the rewards according to the **type of the card**.



Benefits

Issuer Benefits

- Increased card usage vs. cash & check.
- Higher cardholder retention rate.
- Lower cardholder acquisition costs and higher recruitment rate.
- Provide added value and merchant rewards to cardholders.
- Being perceived as innovators vs. non participating card issuers.
- Possibility to design specific co-op marketing operations with selected participating retail chains.

Acquirer Benefits

- Secure or expand margins, premiums can be charged for added value services.
- Secure lasting differentiation on added value rather than pricing.
- New merchants can be recruited more easily for core payment acquiring services.
- Accelerate payment terminal infrastructure migration through enhanced payment features.
- Simple to operate. Does not require special marketing skills.



Cardholder Benefits

- Rewards and/or rebates at participating stores.
- Easy to use - just present the card for payment to receive points, coupons and other rewards.
- No more worries about forgetting to have the card punched and no more missing out on free discounts and rewards.
- Get rewards instantly, right at the point of sale.

Merchant Benefits

- Increased frequency of visit, increased average basket amount.
- Loyalty is built without the trouble and cost of issuing private cards.
- Attract new customers at a lower cost, create loyalty.
- Design tailored campaigns within a multi-participant scheme.
- Receive statistical reports and customer knowledge.



Worldwide References

Welcome has significant worldwide experience with the world's largest financial institutions, including American Express, Akbank, ANZ, Citibank, HSBC, MasterCard, Sumitomo, Visa and others. Welcome has deployed its systems using cards provided by all the major smart card manufacturers (Axalto, G&D, Gemplus, Oberthur) and terminals provided by all the major terminal vendors (Hypercom, Ingenico, Lipman, Verifone ...).



Mashreqbank psc is the largest private bank in the United Arab Emirates (UAE). Mashreqbank has been the first bank in the UAE to introduce a remarkable number of the retail banking products and services that customers now take for granted. In February 2004, Mashreqbank launched its "WOW!" smart credit card containing XLS®. For the first time in the UAE, customers will be rewarded on the basis of their spending pattern and loyalty towards the Mashreqbank card program at over 1,000 WOW! participating merchant outlets, covering all major retail categories within the Emirates. Mashreqbank expects to gain considerable advantage in its markets through migrating to EMV with features enabled by XLS®.



RHB - Leader in financial services, the RHB group serves corporate and individual customers via a network of almost 300 branches and outlets in Malaysia, Brunei, Thailand and Singapore.

In October 2003, the bank launched the "Smart Shopping" experience to offer free gifts, Instant Rewards and Double Reward Points to RHB Bank EVO MasterCard card members when using their card. The EVO MasterCard card is RHB Bank's first chip card.



Komerční Banka (KB) - a subsidiary of Société Générale and the top merchant acquiring bank and leading card-issuing bank in the Czech Republic - has selected XLS® for the launch of the country's first EMV loyalty smart card. KB has already begun converting all of their credit and debit cards to EMV and use XLS® to enhance their cards with numerous added-value services, such as gifts, loyalty points and surprise bonuses.



HSBC Bank Malaysia Berhad is one of the world's largest banking and financial services organizations. This is the first foreign bank in Malaysia to introduce EMV compliant chip credit cards. All of HSBC Malaysia's Visa and MasterCard EMV cards are pre-loaded with XLS®. Malaysia is the first country in the Asia-Pacific region to embark on a full scale national migration to smart cards based on the EMV standard.



Worldwide References



Taishin Bank issues over 3.5 million cards and is the second largest local card issuing bank in Taiwan. Taishin Bank is well positioned to get the most value out of their EMV infrastructure investment by using the fullest features an EMV card offers with dynamic loyalty. Taishin bank has selected Welcome's XLS® smart transaction platform to boost the launch of their EMV cards by the end of the year 2003.



Akbank Turkey (leading issuer and largest acquirer with 70,000 POS terminals in Turkey) has selected XLS® to deploy smart payment cards branded "**Axess**". Launched in October 2001, more than 1.3 million cards have already been issued. The loyalty scheme combines a cross network card issuer driven "cash back" program with individual merchant's instant rewards at retail chains such as Migros and Carrefour supermarkets, BP petrol stations and McDonald's restaurants.



Sumitomo Mitsui Credit Services - Vpoints: largest Visa card issuer in **Japan** with 9 million cards. Launched a multi-function **EMV** chip card in 2001. Offline private or common loyalty points redeemed for payment. Loyalty points can be displayed and interchanged between schemes using Self Service Terminals or Internet PC readers.



ANZ - largest credit card issuer in **Australia**. ANZ's **EMV Java** chip card, launched in Nov 2001, offers preloaded eVouchers, POS generated instant rewards and loyalty points, combined with Internet features using chip card readers in home PC's & in-store kiosks. In the first nine months, ANZ issued over 350,000 ANZ-branded chip credit cards and replaced almost 30,000 point of sale terminals with chip-enabled MultiPOS terminals, providing Australia's first working infrastructure for chip technology.



American Express "Blue": launched in **Australia** in Oct 2001. Offers offline loyalty "credits" stored within the chip card's memory and instantly awarded coupons and discount offers.





Worldwide References



Standard Chartered Bank: the world's first multi-function smart payment card launched in Taiwan in 1997, then deployed across Asia. Offline loyalty points redeemed for payment. Co-branding with department stores and chains, affinity scheme. Cross-borders scheme: points converted into equivalent local currency in other Asian countries.



Chase Manhattan Bank - Infinity, launched in Hong Kong in December 1998. Instantly awarded loyalty points (offline). Instant redemption for payment and free movie tickets / vouchers.



Citibank US - Citi.You: the world's largest bank has already adopted XLS® to deliver new services on their recently deployed MasterCard **EMV** Java chip cards (Q1 2002). RFM loyalty programs, points, coupons and e-tickets downloaded from the web to be used either online or at physical stores, card content display.

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Worldwide References

Strong retail marketing expertise

Additionally to the banking market, Welcome has a strong marketing expertise in the following other loyalty segments, with thousands of merchants running real-time rewards based on XLS®:



Retail: McDonald's, Quick Fast Food, Video Futur, MK2 Cinemas, AOM Airline (France) BP, Migros and Carrefour (Turkey) Toyota



Student Segment: Imagine"R" Paris transport pass. **Aix-Marseille** student ID card launched in partnership with McDonald's and Video Futur. **"Cartes Jeunes"** 1.5 M insurance cards launched in 1998, instant rewards issued at participating retailers such as **Quick** fast food chain with 82 restaurants in Paris area resulting in a 29% average basket uplift.



Coalition Marketing: AMG **"New"**, 800,000 cards recognized at over 500 quality establishments all over Singapore. **"Buy&Fly"** retail loyalty solution launched on 10 Nov 99 by Malaysian Airlines System.



Intellectual Property Rights

Welcome has invested over 120 man years in R&D and owns extensive intellectual property rights through almost 100 patents filed in 37 countries.

Our customers benefit by being the first to adopt exclusive, innovative products in their respective highly competitive markets.

Welcome's key patents cover the ability to dynamically manage behavior driven real-time rewards relating to visits, cumulative spending or entries at designated merchants. Other patents cover the ability to add and redeem e-coupons from a smart card, or the use of mobile phones and hand-held devices to perform enhanced payment transactions.

Real-time RFM patent (smart card based frequency marketing)

This patent covers the ability to dynamically manage services relating to entries, visits or cumulative spending at designated merchants. It allows **RFM** behavior data ("recency, frequency, monetary value") to be placed directly in the smart card, where it can be dynamically updated at each transaction.

Direct marketing software in the merchant's point of sale terminal interacts with behavior data in the card, so targeted rewards and messages can be provided to customers in real-time directly at the point of sale terminal, at very low cost. As the rules for giving out rewards are managed on the card and in the terminal, the cardholder can take advantage of them immediately. So additional costs related to processing and handling redeemed rewards are also eliminated.

E-coupon patent (smart card based electronic couponing)

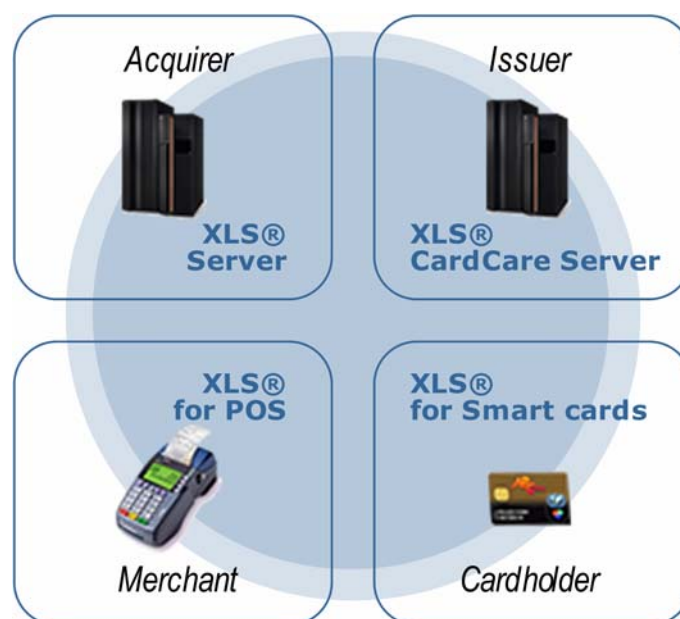
Customers obtain **e-Coupons** at in-store kiosks or by clipping them from Internet PCs. Coupons stored in the chip are removed automatically when the discounted product is scanned at the register. The customer presents the smart card to the cashier, who inserts the card in the POS terminal. Scanned purchases are automatically compared to the coupons stored in the card's memory chip. When a couponed item is purchased, the system deducts the coupon from the customer's receipt and electronically sends the "redeemed" coupon to the XLS® host for processing.

Other patents (mobile phone smart marketing applications) :
Point of sale applications using mobile phones and hand held devices.

The XLS® system includes :

- XLS® Server, the central database and application server running XLS® and providing marketing, communication and transaction data management and processing services
- XLS® CardCare, the server dedicated to providing issuer services for card-level data access, management and interfacing
- XLS® for Payment Terminals, the enhanced payment application which runs on POS terminals at merchant outlets,
- XLS® for Smart Cards, which consists of card specifications defining the smart card's memory mapping. It also includes the XLS® applet when open platform cards (Multos or Java) are used.

XLS® is a full end-to-end solution that provides all the key software components required to build an enhanced payment infrastructure. XLS® has been designed throughout as a scalable, robust solution. It is adapted to support tens of millions of cardholders and hundreds of thousands of merchants. Welcome also offers complete technical assistance and marketing services related to the use of XLS®.



Overview

Definition of campaign parameters: segmentation, types of campaigns, RFM scenarios, coupons, point pools

Definition of merchant and POS terminal details

Definition of access rights and user management

TCP/IP-based communication with terminals: download of parameters for terminal configuration, upload of transaction files in batch mode

Terminal fleet administration and monitoring

Card/cardholder management

Transaction batch processing and monitoring, exception handling

Standard reporting: merchant activity, card activity, merchant loyalty statement

Technical requirements

Operating System requirements:

- SUN Solaris 8/9

- HP-UX 11.11

- Microsoft Windows 2000 SP3

Application and system software requirements:

- Sun JDK 1.3.x

- J2EE-compliant platform: Apache Tomcat 4.1.x, iPlanet Web Server 6.0, SunONE 7

- DBMS: Oracle 8.1.7 Release 3, Oracle 9.2.0.1 Release 2

Welcome deliverables

XLS® Server software for selected hardware and software platform

Training and documentation

Support and maintenance

Additional deliverables:

Professional services: installation, end-to-end testing, customized reports.

Overview

Card information retrieval and storage services
Synchronization with latest transactional data via batch mechanism
Card image available without the need for the customer card to be present
Available card information includes: subscribed campaigns, RFM status, points and e-coupons (awarded and redeemed), transaction history.
Display format and data analysis customized for Call Centers or Home Banking services
Export files (XML) for Card Management Systems for smart card replacement/renewal process
Export files (XML) for Host Statement systems for seamless statement generation
Adjustment and dispute management support for host generated rewards
Multiple graphical display formats

Technical requirements

Operating System requirements:

SUN Solaris 8/9

HP-UX 11.11

Microsoft Windows 2000 SP3

Application and system software requirements:

Sun JDK 1.3.x

J2EE-compliant platform: Apache Tomcat 4.1.x, iPlanet Web Server 6.0, SunONE 7

DBMS: Oracle 8.1.7 Release 3, Oracle 9.2.0.1 Release 2

Welcome deliverables

XLS® CardCare Server software for selected hardware and software platform

Training and documentation

Support and maintenance

Additional deliverables:

Professional services: customized display plug-ins, integration with banking legacy systems.



for Payment Terminals

Overview

Up to 3 RFM campaigns, 2 generic campaigns and 4 event campaigns can run concurrently on a single terminal

Seamless integration with any payment application (credit, debit or electronic purse)

Built-in support for all XLS® supported smart card technologies

Point processing: points issuing and redemption, statement printing (includes information regarding the chip's previous balance, new benefits obtained, current balance, etc.)

Coupon issuing and redemption: coupons can be printed, displayed on the screen or stored on the chip to be electronically redeemed

Optional add-on modules: prepaid value, item-level campaigns (cash register integration required)

TCP/IP-based communication: reception of parameters configured centrally on the XLS® Server and automatic data collection mechanism for transaction upload to the XLS® Server

Technical requirements

Memory requirements: Between 256KB and 700KB of memory

Required configuration: 2 line display, modem, printer, SAM card reader, software development kit and ANSI C compiler

SAM card available: XLS® SAM Java Applet

Terminals currently supported by XLS®

Axalto MagIC 6000, 9000, 5100, 6100 and X1000 Families

Dionica Omero X

Ingenico Elite 500 / 700 Family

Hypercom ICE 5500

Lipman Nurit Family

Verifone Omni 3750

Portable to most terminals on the market

Welcome deliverables

XLS® software for POS payment terminal

SAM card Java Applet. SAM cards can be directly supplied by Welcome and personalized at the licensee's premises, in this case the SAM applet and the personalization software tool are included in the deliverables

Training and documentation

Additional deliverables:

Professional services: custom features, POS localization, integration with the payment application, integration with an Electronic Cash Register (ECR) system, etc.



for Smart Cards

Overview

An XLS®-enabled smart card contains the following data:

- General data** describing the card, the cardholder and the issuer,
- RFM data** for each program in which the cardholder participates,
- Electronic coupon data** describing coupons earned or clipped by the customer,
- Point counters** providing details on points accumulated by the customer.

Memory requirements

Each RFM program requires 16 bytes. 500 bytes can roughly support 30 individual programs running simultaneously within the same smart card.

Each electronic coupon record requires 20 bytes (for electronic storage and redemption).

Each point pool requires 16 or 32 bytes.

Card technologies currently supported by XLS®

XLS® is designed to either run on open platforms – such as Java and Multos – or “native” platforms provided by all of the major card manufacturers:

Axalto E-galleon, Multima, Palmera (Java Card)

ASK CD97

Gemplus MPCOS EMV R3, MPCOS EMV R5, MPCOS Xpresso, GemValue, GemXpresso range, Multos range

G&D StarDC EMV range, StarCOS range

MasterCard MODS

Oberthur VSDC UKIS, ABI, GalactIC (Java Card)

Proton Prisma BP

Sagem CB EMV DDA

Visa VS3

XLS® Java applet compatible with Java Card 2.1 and OP 2.0.1

Portable to most smart card platforms on the market

Welcome deliverables

XLS® card mapping specifications for each card technology

XLS® applet and technical specifications for open platform card technologies

XLS® certification process

Technical support to card manufacturers

Technical support to card issuers

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