

The E-commerce

ACI's electronic commerce software provides the technological muscle needed to handle Internet payments processing

The Chinese New Year was celebrated on February 5, 2000 with the usual festivities and hopes of prosperity. For five entrepreneurs, the hoped-for prosperity came quickly. On February 10, three bachelors, as a result of an Internet merger deal, each became worth an estimated £55 million (\$88 million US). The following day, the two partners who started lastminute.com were predicted by analysts to receive £80 million (\$130 million US) with the planned IPO of the company on the London and New York stock exchanges.

Incredibly, lastminute.com, like many Internet firms, has not made a profit and is not expected to do so until 2002. What investors are buying is the potential offered by the second-best-known online shopping site in Britain after Amazon.com.

As this Internet business model repeats around the world, ACI is providing e-commerce solutions that make online shopping possible.

No Constraints

In Korea, ACI recently signed a deal to provide a virtual-merchant e-payment-acquiring system to a joint venture that plans an initial public offering (IPO) of stock in 2001. The ACI solution will form an e-payment engine that allows this joint venture to potentially achieve huge returns as it competes over the infrastructure used to provide services to consumers and business.

ACI provides a complete business solution with e-commerce architecture—not just component add-ons. As a result, the joint venture has the ability to grow and change its e-commerce infrastructure free of any technological restraints.

E-commerce solutions from ACI give service providers the ability to acquire merchant transactions over virtual channels, enable virtual merchants with payment clients, and use certificates to authenticate and secure transactions that take place between merchants, consumers and payment handlers.

ACI contributions to the development of the Open Trading Protocol and Internet Open Trading Protocol specifications mean we understand e-commerce software. This enables ACI to deliver packaged solutions that make the adoption of e-commerce as smooth as possible. Our customers should be focused on their e-commerce business plans—not technology. That is where ACI can help.

Managing The Consumer/Merchant Relationship

The Korean implementation of ACI's e-commerce solutions uses a Mondex smart card solution as the payment method. Mondex is an e-cash solution that stores value on a smart card and operates very similar to cash. For example, once value has left the consumer's smart card, it is gone. To make sure cardholders are not throwing away their hard-earned cash, consumers making purchases via the Internet need to know that the merchant they are dealing with is reputable and that they will receive their purchases.

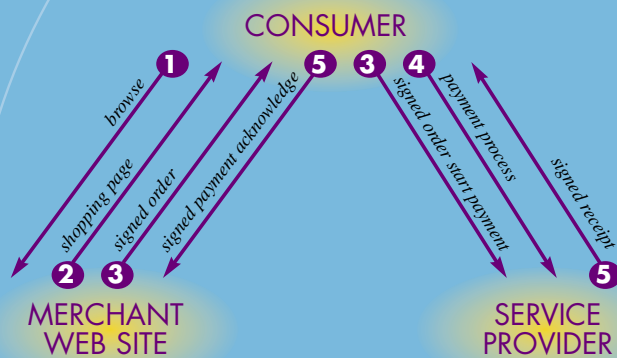
ACI's e-commerce solutions alleviate these concerns by using signed messages between the merchant, the consumer and the payment processor.

Enabler

Commerce

Transaction e-trading
Online Shopping





Here's how the system works.

1. A consumer visits a merchant Web page and makes a purchase by entering the required information.
2. The payment client software is then loaded, and a signed message is sent to the payment handler to initiate payment.
3. The payment handler verifies the signature and begins a signed payment so the consumer's client software knows it is communicating with a genuine payment handler.
4. After the payment is completed, a signed receipt is issued to the consumer and the merchant.
5. The merchant uses this receipt or payment acknowledgement to begin the process of shipping the goods.

ACI Becomes Member of Global Platform Inc.

ACI is now a member of GlobalPlatform Inc., a cross-industry organization founded to advance global smart card adoption. While it was established by issuing organizations of various industries, GlobalPlatform Inc. is open to all parties with an interest in the development and use of multi-application smart cards, combining the interests of issuers, vendors, public entities and technology companies.

GlobalPlatform is the first cross-industry organization to promote a global infrastructure for smart card implementation across multiple industries with the goal to reduce barriers hindering the growth of cross-industry, multiple application smart cards, while still allowing competitive, unique product capabilities.

"Our customers around the world have been telling us they want to enjoy the benefits of smart card programs—but implementing them can be difficult," said Graeme Ward, marketing director of ACI's Electronic Commerce business unit. "The development of generally accepted global standards helps to remove uncertainties. Through our work with GlobalPlatform Inc. and our experience helping financial institutions add chip technology to their existing systems, we can enable our customers to adopt smart card technology with confidence."

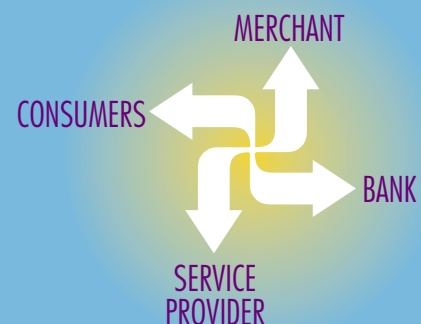
GlobalPlatform Inc. is driven by a cross-industry board of directors who lead the work activities of various committees, to come to the development of conventions needed to facilitate card issuance, application deployment, card acceptance devices, and post-issuance loading and management of on-card services. As a full member, ACI has representatives on all committees—Card Infrastructure, Terminal Infrastructure, Systems Infrastructure and Business Development—and is proud to contribute to the acceleration in the implementation of dynamic multiple application smart cards worldwide. •

The ACI solution can be implemented in many ways. Depending upon the business, the solution can be hosted by a bank, a service provider, or a merchant. The implementation also can be tailored to process specific payment methods. For the Korean company, a service provider is hosting the solution, and the payment method is electronic cash.

When implementing an e-cash solution, two services must be provided to make the virtual merchant acquiring process viable. The consumer must be able to load value to spend it—which requires banking services—and once the consumer has loaded value; he or she must have the opportunity to buy something.

In ACI's Korean implementation, the consumers will load value from a merchant shopping Web page to begin shopping.

Korean Implementation



Solutions That Meet Growing Needs

The modular architecture of ACI's e-commerce solutions can use plug-ins (small software modules that add a specific feature or service to a larger system) for various payment methods. For the Korean implementation, smart cards using Mondex e-purse is the chosen payment method. If the customer wants to later add credit card or smart debit functionality, a secure sockets layer (SSL) plug-in can be added. The key advantage of ACI's solution is that the software has the flexibility to grow and adapt to a specific customer's business requirements.

There is little merchants must do to maintain the system. For example, there is no software maintenance for consumers. The payment client is loaded onto the consumer's computer when the consumer makes a purchase.

Reports enabling settlement and reconciliation can be placed online so the merchant can see activity at any time.

For the process of filling customers' orders, information from each purchase can be compiled into a batch file and processed at the end of the business day. If the product is delivered digitally, such as information or MP3 music files, immediate delivery is required, and the acknowledgement message is immediately made as well.

ACI's e-commerce solutions are designed to make the most of virtual-merchant acquiring. Because each merchant environment is unique, the merchant needs to do little to maintain the system. ACI solutions allow merchants to be good at retailing—not programming.

We recognize that the Internet has fundamentally altered many business practices—and will continue to do so. For ACI, the dynamic Internet environment is a once-in-a-lifetime opportunity to provide customers with the means to ride the growing e-commerce wave. ●

Public Transport in the Netherlands Utilizes ACI Contactless Smart Card Solution

Boy Hendriksen,
director of Smart Card
Consultancy Services

In the Netherlands there is a strong push to use smart cards in public transportation. In fact, in coming years the smart card is expected to replace paper tickets. The objective of this migration from paper to pulse is to stimulate the use of public transport and reduce fraud. Fraud causes financial losses and creates disputes that lead to aggression and violence in the public transport system.

To help public transport companies move to smart card technology, ACI provides a number of solutions. In work with Connexxion, the largest public bus company in the Netherlands, ACI provided Chipper and Chipknip e-purse payment solutions. These two smart card schemes are widely used in Holland, extending from 4,000 buses to the back office and the Chipper and Chipknip hosts.

The Connexxion implementation utilizes a "contact" smart card scheme—meaning each card must come into contact with a reader to complete the transaction. In an effort to speed up the transaction process, a number of city transport companies are looking to "contactless" schemes.

The Amsterdam Metro offers ACI an opportunity to help with a contactless smart card implementation. ACI was selected to deliver smart card consulting for the public transport company of Amsterdam (GVB). Based on the requirements of GVB, TSA has designed a system with check-in and check-out functionality and a closed purse.

Specifically, ACI is defining the back-office—including card management, card processing and card-fraud detection. As a result, ACI also is involved in consultancy support for a similar project in Rotterdam, which is likely to follow the Amsterdam development scheme. Other contracts—with the Dutch Railways for example—have been put into place to support future smart card schemes.

The contactless card schemes will start off as city-based schemes with limited functionality. The need for interoperability will certainly create the demand for dual interface and dual chip cards. ACI Worldwide will be involved and ready to support this process. ●