



# *Danish Payment Systems and IBM: Making the Internet Safe for E-Commerce*

When Carl Christian Aegidius bought Stephen King's "Rose Madder" from a bookstore on December 30th, 1996, he made history. He executed his purchase from miles away using his credit card, yet no one other than his bank knew his card number—not even the merchant. His was the first secure credit card payment over the Internet. And it was made possible by a partnership between Danish Payment Systems (PBS)—Denmark's leading credit card and debit card payment processor—and IBM.

PBS's business involves processing over three hundred million credit card and debit card transactions a year in Denmark alone. This entails verifying inter-bank payments between customer accounts. PBS wanted to expand its business even further by embracing online commerce. Consumers and companies are moving to the Internet, and PBS wanted to be there when they arrived.

## **Addressing E-Commerce Security Concerns**

For PBS, the rewards of a successful e-commerce system are great. PBS benefits from the additional business resulting from processing credit card transactions made over the Internet. But PBS is not the only winner. Customers, for example, are able to securely order goods and services via the Internet from their homes and offices—a great convenience. And merchants are able to market their products to more customers than ever before. In short, everyone wins. As Per Ladegaard, the

CEO of PBS, notes: "The Internet is perfect for electronic commerce and is very easily accessible."

In deciding to develop its e-commerce system, PBS had the challenge of overcoming concerns about commercial transactions conducted over the Internet. People worry, for example, that if they purchase something by sending their credit card number over the Internet, the number could be subject to "cybertheft." What they may not know, however, is that with the right system in place, it is far safer to purchase goods with a credit card over the Internet, than it is to place a credit card order by mail or phone.

Credit card purchases over the phone, for example, subject the merchant to the possibility of credit card fraud, because the card number is used without the signature. Merchants the world over are losing millions of dollars annually on fraud, especially from mail and telephone orders. The challenge for PBS was to provide merchants and their customers with a payment system that would eliminate such concerns. PBS turned to IBM and its CommercePOINT suite of products for a solution.

## **Making it Happen: PBS and IBM get SET for Business**

Together with Europay and MasterCard, PBS and IBM launched a pilot e-commerce program in December 1996. Carl Aegidius's purchase was the first transaction of the pilot project.

<b>Application</b>	Secure Internet credit card transaction processing
<b>Software</b>	IBM CommercePOINT Payment IBM AIX IBM DB2
<b>Hardware</b>	IBM RS/6000

IBM worked with PBS to ensure a smooth integration of the new electronic payment system with PBS's existing system, where 90 percent of the transactions are handled through a private electronic network. PBS is partnering with IBM to extend the payment system. For example, PBS has already begun moving the payment system beyond Denmark's boundaries by processing the world's first cross-border SET



*Making history with the world's first commercial SET transaction—Carl Christian Aegidius (seated), Jan Frøshaug and Per Ladegaard.*

transaction in April 1997. Secure Electronic Transaction (SET) is an open protocol allowing secure transfer of sensitive information across the Internet. Developed by MasterCard and Visa, with significant contributions from IBM, SET was also the security standard allowing Aegidius's purchase in December.

Now together, IBM and PBS are offering a joint service called IBM SET Utility, which will enable financial institutions to offer their merchants and credit cardholders access to the first SET infrastructure and the ability to make secure, international credit card payments over the Internet.

Upon deciding to tap the potential of the Internet, PBS needed a solution that enabled all parties involved—from the customers ordering the product using their Web browser, to the merchant selling the product, to the bank or acquirer verifying the credit card transaction—to participate easily in a secure electronic transaction. IBM was able to provide that solution via its CommercePOINT suite of products.

IBM CommercePOINT provides a complete, end-to-end electronic commerce solution. The key component is CommercePOINT Payment, a SET-based family of applications that enables secure credit card transactions for the protection of those doing business over the Internet. CommercePOINT Payment includes:

- CommercePOINT Wallet for consumers
- CommercePOINT Till for merchants
- CommercePOINT Gateway for banks and acquirers

The IBM e-commerce solution, using certificates issued by PBS, provided the means to give each customer a unique identification while at the same time protecting that customer's identity from manipulation. The signature is issued by a trusted institution, like PBS, and acts as an electronic envelope, carrying your authorization to the merchant, but keeping sensitive information—like your credit card number—secure. Per Ladegaard describes the advantages:

“The new SET standard provides a security system which makes it possible for PBS in fractions of a second to verify that it

is the cardholder who is using his own card on the Internet and that the cardholder is in contact with a genuine merchant. Thanks to the SET standard, it will be possible to prevent misuse of cards used for electronic commerce on the Internet.”

### **Value for Customers and Merchants—and PBS**

No matter how great the technology, there would be no point in implementing it if customers found it difficult or inconvenient to use. CommercePOINT Wallet is an easy application for customers to implement and realize the benefits from—it's just a plug-in to the customer's Internet browser, with an easy-to-navigate graphical interface. It provides the cardholder with storage and management of credit cards and certificates while shopping. With it, customers can make online payments with even more ease and peace of mind than they now have with other forms of payment, because the transactions are more secure and the identities of all parties to the transaction are verified.

Merchants use CommercePOINT Till to support their existing credit card payment processing while handling secure credit card transactions over the Internet. In addition, the product handles message management, encryption, certification and record keeping. When merchants add IBM Net.Commerce, another CommercePOINT offering, they can extend their online presence, sell products around the clock and around the world, and build better customer relationships.

For PBS, the value of the IBM solution lies in being a gateway for credit card transactions over the Internet and thus being situated to take advantage of the potentially enormous market for e-commerce.

With a secure, reliable solution in place, IBM is making people comfortable doing business in cyberspace. “The fear [of conducting commerce over the Internet] has now been eliminated,” says Ladegaard. With the expertise in hardware and software that IBM has to make e-commerce happen, the only thing Carl Aegidius, customer, will have to fear is turning the pages of Stephen King.

**For more information please contact your IBM Marketing Representative or IBM Business Partner**

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See the PBS Web site at [www.pbs.dk](http://www.pbs.dk)



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