



E-commerce Helps PBS Create the Future of Money

“While being first can have its challenges, it’s also very exciting,” says Stig Møllgaard, product manager at PBS in Denmark. For PBS, the rewards of being first are starting to pay off.

PBS is probably the largest conductor of transactions in the world using the SET Secure Electronic Transaction protocol. In 1997, PBS conducted about 300 million electronic card transactions. While the number of Internet transactions is still small, Møllgaard says he expects that number to grow significantly.

“IBM has proven its commitment to us with regard to SET. And, together with IBM, we’re starting to see that vision become a reality.”

—Stig Møllgaard, Product Manager at PBS in Denmark

“Card acquiring and transaction switching is part of our core business,” says Møllgaard, “so having as many card payments as possible entering through our systems and also from the Internet is an important objective for us. But from the Internet, we only want to accept SET transactions. We strongly believe that the e-commerce world will not really take off until the customers rely on the security concerning the payments.”

Creating Secure E-commerce

PBS’s systems run 24 hours a day, 7 days a week, so great emphasis is placed on both security and reliability, which is the reason why PBS chose AIX and the IBM RS/6000. “Many Internet shoppers are concerned about security,” adds Møllgaard. “With SET, they know they have a solution that makes credit cards in the virtual world almost as secure as they are in the physical world.”

Application	SET-based secure Internet credit card transaction processing
Business Benefits	Expanded domestic market, new international markets, increased international transactions
Software	IBM® CommercePOINT™ Wallet IBM CommercePOINT eTill IBM CommercePOINT Registry for SET SET Secure Electronic Transaction™ IBM AIX® IBM DB2®
Hardware	IBM RS/6000®



PBS is using SET to secure credit card transactions over the Internet.

However, fraud is always a concern. "In our view, only SET provides the security needed in order to keep fraud on the Internet down to a reasonable level," says Møllgaard. "Over the past few months, we have seen that the Internet now, one way or another, is involved in 30 percent of all transactions leading to a charge back worldwide. If we do not build secure systems, the customer's faith in the global card brands will disappear — both over the Internet and in the physical world."

The PBS e-commerce solution employs SET security in each stage of the transaction process. IBM Payment Gateway links the Internet with PBS's existing payment system using SET, which is based on advanced encryption technology. The cardholders use SET by means of the IBM CommercePOINT Wallet, which is distributed by PBS or the issuing banks. The merchants have implemented IBM CommercePOINT eTill. PBS issues VISA or MasterCard certificates for all cardholders and merchants on behalf of itself or the banks by means of the IBM CommercePOINT Registry for SET, which also is implemented at PBS. By means of digital signatures and digital certificates, the SET protocol ensures the identity of each party to the transaction and also the transaction integrity and confidentiality.

The Benefits of Being First

PBS has realized several benefits of being the first to enter the SET market. Their original market was individual merchants. However, PBS is now the certified issuer of SET certificates under MasterCard and Visa International, allowing it to expand its market to include card associations and banks. With the certification of the two most important international card brands, PBS has introduced the first production version of SET 1.0 to both the national SET customers and the international SET Utility customers.

Additionally, PBS has been able to expand its market beyond the Danish borders. "In the physical world," explains Møllgaard, "card acquirers and physical terminals can only

operate within their own country boundaries. But on the Internet, we don't know if a terminal or user is in Denmark or outside the country, so we'll potentially have many more international transactions than we would have otherwise." The international activities are primarily carried out in conjunction with IBM International through SET Utility Services. SET Utility Service is offered by IBM and PBS to international financial institutions and provides Payment Gateway and certificate management services for use with SET.

Looking Ahead...

But just because things are going well, PBS has no plans to sit back and get comfortable. They have an aggressive marketing strategy for rolling out their implementation to the rest of the Nordic geography. In looking at the cardholder side, they plan to intensify their marketing of SET certificates. Additionally, the banks in Denmark, who are all issuers of VISA and MasterCard, are increasing their marketing efforts. As a result, PBS has the potential to see over one million Danish SET cardholders in 1998.

Møllgaard believes that the adoption of SET by the general public is not that far away. "I strongly believe, as a citizen, that we will see a more general adoption of SET-based transactions over the next few years. I believe that many of us would like to be able to order the routine items. Now I go to the supermarket every Saturday morning with all the other Danes, right? And I buy certain things every Saturday. I would be willing to pay up to \$8 to avoid making that trip. It could be done by means of the Internet and the secure payment mechanism."

While being first to market can certainly have its challenges, overall PBS has been happy with the roll-out of its SET implementation. "IBM has proven its commitment to us with regard to SET," says Møllgaard. "And, together with IBM, we're starting to see that vision become a reality."

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