Neopost Speeds Up Mailing Systems with Elliptic Curve Cryptography (ECC)

Using ECC technology for their mailing systems allowed Neopost to quickly generate verifiable digital signatures.

"We went to Certicom because we knew we needed to use ECC in our solution in order to make it efficient – in size and speed. Certicom holds key patents around ECC and therefore was the logical place to go."
– T. Le Jaoudour, Director R&D France, Neopost

Neopost takes mailing systems seriously. The number one company in Europe and number two company worldwide in mailing, document and logistics systems is revolutionizing the digital postage mark (DPM) to increase postal efficiency.

Approved to produce customized mail systems in both Europe and North America, Neopost has been working with a wide range of customers in the corporate, public and professional sectors to make DPMs more cost effective. Responding to the needs of its customers, Neopost decided to develop a solution that increased the speed at which digital signatures were produced.

THE CHALLENGE: the need for Elliptic Curve Cryptography (ECC)

Having worked with the postal industry for many years, Neopost knew their new machines needed to be efficient – small, fast and secure. "There isn't a lot of available resources in a mailing system," says P. Blanluet, Project Leader, Neopost. "We need to keep the size of the digital signatures small while increasing efficiencies and adding the necessary security features."

The implementation couldn't take up a lot of room and it had to be highly efficient – being able to pump out 250 letters per minute.

REQUIREMENTS
- complete, proven and compact DPM solution
- easy integration for accelerated time-to-market
- uses ECC technology's small key size for efficiency and speed

THE SOLUTION: ECC technology and professional services

Neopost contacted Certicom because of its long history with the highly efficient and optimized ECC technology, as well as the extensive patents it holds for ECC implementations. Neopost knew a Certicom implementation would provide the necessary efficiency with little impact on performance. "We went to Certicom because we knew we needed to use ECC in our solution in order to make it efficient – in size and speed. Certicom holds key patents around ECC and therefore was the logical place to go," says G. Steward, Software manager, Neopost.

KEY BENEFITS
- highly efficient, optimized and customized ECC implementation
- improved processing speeds and bandwidth utilization
- minimal space requirement
- plug-and-play integration for faster time-to-market
- strong professional services team

securing innovation

Certicom licensed its ECC technology to Neopost. The Certicom Professional Services team used Security Builder® Crypto™ toolkit to embed ECC-based security into the Neopost mailing systems. The implementation enables Neopost to create new DPMs in every instance. "Not only is the security built into our machines standards-based and therefore strong and reliable, but it also gives us considerable competitive edge due to its efficiency in signature size and speed," says Le Jaoudour.

ECC is the only technology that provides Neopost with digital signatures that meet the requirement for postal standards as well as for an extremely small footprint. This meant that its new mailing systems were not drained of all resources – a primary requirement for Neopost. Moreover, ECC has made it possible for the machines to perform DPMs at a faster speed than some competing systems. The plug-and-play integration greatly reduced Certicom's development time and therefore Neopost's time-to-market. "Certicom was able to build us the implementation that we needed," says Le Jaoudour. "It had all the desired results with minimal impact on performance."

THE RESULTS: the power of ECC

Partnering with Certicom meant Neopost could meet its needs and deadline for its new products. Thanks to Certicom's fast integration and dedicated professional services organization, Neopost was able to successfully go to market with its IJ25, IJ35 and IJ65 mailing systems.

RESULTS

- **Fast time–to–market**
- **Increased efficiency and flexibility**
- **State of the art technology**
- **Small bandwidth requirements**
- **Standards–based solution**

About Certicom

Certicom Corp. is the authority for strong, efficient cryptography required by software vendors and device manufacturers to embed security in their products. Adopted by the US Government's National Security Agency (NSA), Certicom technologies for Elliptic Curve Cryptography (ECC) provide the most security per bit of any known public key scheme, making it ideal for constrained environments. Certicom products and services are currently licensed to more than 300 customers including Motorola, Oracle, Research In Motion, Terayon, Texas Instruments and XM Radio.

About Neopost

Neopost ranks number one in Europe and number two worldwide in mailroom equipment and logistics systems. The company sells mailing, document and logistics systems, and provides customized mail processing solutions covering both letters and parcels to a wide range of customers in the corporate, public and professional sectors. Neopost offers the most advanced solutions for online or off-line postage, large volume mail insertions, occasional parcel delivery and logistics management and traceability.

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