

Orion Systems' Patent: Method and Apparatus for Generating Secure Endorsed Transactions

White Paper

Updated: Spring 2011

<http://www.orisys.com/>



United States Patent 6,745,936, 7,246,0977



CONTENTS

CONTENTS 2

EXECUTIVE OVERVIEW 3

Introduction **3**

PAPER INTENSIVE PROCESSES 4

Paper Intensive Transactions Driving Business Costs Up **4**

ORION'S PAPERLESS PATENT 5

Paperless Transactions: "Secure Endorsed Transactions" **5**

CONCLUSION 7

“To ensure the data corresponding to transactions has not been altered, a method and system are provided for generating secure endorsed transactions having transaction data representative of transactions and unique identifiers corresponding to the parties endorsing the transactions.” This abstract, taken directly from Orion Systems’ patent (US #6,745,936), illustrates the fundamental nature of Orion’s patent for securing electronic transactions and agreements in the digital world. In today’s world, where identity thefts are commonplace, and businesses are moving increasingly towards streamlining their processes and commerce activities, the need to secure commerce, internal processes, and workflow, has never been more in demand. As business continues to march toward a paperless world, the need to protect one’s assets from unwarranted disclosures, ensure regulatory and legal compliances are met, and build in high levels of security company-wide has become paramount. It is precisely for these reasons that Orion Systems innovated and patented a security standard that raises the bar and benefits every business engaged in automating their enterprise.

Orion retains the services of the prestigious law firm of Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P. Based in Washington, DC, Finnegan, Henderson, et. al. has over 300 partners, specializing in IP with a world wide presence.

For more information on Orion’s Solutions, please visit our website at <http://www.orisys.com/>

Businesses today often have costly paper-based processes for internal documents, contracts, agreements and commerce. This set of processes has become increasingly unwieldy, error prone and insecure as labor and transportation costs go up and customer demand for rapid turnaround increases.

These paper-based processes also leave companies increasingly vulnerable to malfeasance: customer-identifying personal information can be lost, stolen or misappropriated, accidentally or deliberately. The potential for harm to customers through ID theft or misuse of personal information mirrors the costs to the company's bottom line and profits.

As security concerns increase and there is greater scrutiny of corporate handling of personally identifying information, paper will be the increasingly weak link in the business chain. Businesses will move toward more secure and unalterable ways of signing documents, one that protects their business as well as the parties involved in the transaction. This move toward a digital, paperless environment will require security at the most basic level – the ability to both indicate the intent to accept the terms of the governed transaction and to protect said transaction from tampering or altering once it is complete. As Orion and its innovative patent have demonstrated, we can effectively deliver entirely biometrically signed documents that are fraud resistant and tamperproof. The biometric, any unique personally identifying information, when combined with a document (contract, agreement, credit transaction) can be used to demonstrate both identity and intent – the two most important components of any transaction.

Orion's patent is fundamental in these new landscapes – it combines the document, and the biometric into an unalterable, tamperproof format, that will alleviate the burden of paper and provide the advanced security demanded.

Paperless transactions offer secure and efficient ways to conduct business, resulting in significant costs savings, improved efficiency and increased compliancy. Businesses are increasingly adopting new approaches and embracing new technologies to help them deal with paper inefficiencies and insecurities. Applications for approvals, human resources, and customer transactions are but a few of the ways business are beginning to save money by eliminating the paper.

Business processes that legally require handwritten signatures pose special problems in the electronic world. It is incumbent upon business to demonstrate a high level of security when acquiring an electronic signature and affixing it to their electronic document. If the electronic signature data is available, even unintentionally, to outside entities, a breach of personal data can occur that could have disastrous consequences. Further, if the document is altered in any way whatsoever after being signed, the legal or regulatory enforceability of the document is compromised. It is important that chosen solutions handle these occurrences and ensure the integrity of the document and the intent of the parties involved.

In business since 1991, Orion Systems has been a pioneer and market leader in the field of secure endorsed electronic transactions. Filed in 1996, Orion's patent is the industry's most fundamental patent concerning biometrics, transaction data, and security. In its most elemental form, Orion's patent can be summarized using the following simple equation:

Biometric + Document + Security = Orion's Patent 6,745,936.

Biometric - Hand written signature, Fingerprint, Voice print, etc

Document - Electronic Contracts, Receipts, Forms, etc

Security - Public Key Digital Signature Cryptography

Orion's patent is a broad based patent that combines any biometric with any electronic document using Public Key digital signature algorithms. Public Key systems provide digital signatures that cannot be repudiated. Further, Public Key systems make it easy to authenticate a person's identity. The same widespread Public Key digital signatures that are used to secure the Internet's email, communications, and storage, and just about everything else on the Internet, are used in our patent. Whenever Public Key digital signatures are combined with human biometrics on a document, our

patent is in force. The patent was filed in 1996, long before securing the Internet was an undertaking. The patent is now the basis for securing all biometrically signed documents.

The intrinsic security of the patent provides a tamper-proof and fraud resistant method for the parties signing an electronic document. It is tamper-proof because the document is unalterable: our software detects even the slightest alteration in the document and our patented security will flag the document as tampered with. It is fraud resistant because the signature combined with the document contains the signers identifying information. The signature is a biometric (in the form of an electronic signature or fingerprint, for example) which is a unique human identifier of the individual. The result is a signed document that cannot be altered and verifies the identity of the parties involved.

CONCLUSION

Orion Systems is a leading software developer of secure paperless solutions employing electronic signatures, fingerprints and other biometrics. Based on our fundamental patent, our software is the only solution that securely and irrefutably electronically binds your customer's or employee's biometrics to your document, creating a legally enforceable signed document. Our products, designed specifically to address key industry needs, can be viewed online at our website, www.orisys.com.

Orion Systems maintains a diverse portfolio of intellectual property (IP), including copyrights, trademarks, trade secrets, and patents. Like other technology providers, our technology is licensed by business entities worldwide, and we routinely apply to governments around the world to obtain additional patents on our inventions. A patent establishes ownership of an invention, enabling the patent owner to benefit commercially from investments in innovation. A patent is granted if government patent examiners conclude that an invention is a true innovation compared with existing technology. Orion Systems has been awarded United States patents, and our worldwide portfolio continues to grow. Parties interested in licensing Orion's IP are encouraged to contact our Intellectual Property and Licensing Group by submitting an online request.

If you have feedback about this document, please send e-mail to: sales@orisys.com.

Boston Office

15 New England Exec Park
Burlington, MA 01803

Austin Office

9600 Great Hills Trail
Suite 150W
Austin, TX 78759

Tel: 1-877-OrionSign (674-6674)
www.orisys.com

©Copyright 2011, Orion Systems, Inc. All rights reserved. Registered or unregistered trademarks in this document are property of their respective owners. The products in this document are protected by one or more patents, US. Patent number 6,745,936 and 7,246,097 Specifications subject to change without notice.