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A Sign of the Times: Using Digital Signatures

By Jo Day and Kevin Day
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While each of us has signed our names on electronic pads at our local grocer, gas station and local retailer for some time, have you ever wonder why paper-intensive businesses in the financial services sector haven't been key adopters of this technology? So, when does the revolution arrive? You'll be happy to know it is (finally) underway.

E-pads are increasingly being used by mortgage lenders, insurance agents, real estate agents and broker-dealers. The e-pad enables you to use a pen to sign on a digital pad instead of on paper. That signature is stored electronically along with the transaction for which you are confirming your acceptance. Typically, the signer receives a paper copy of the signed receipt.

Santa Monica, Calif.-based National Planning Holdings, Inc. (NPH) a holding company of four broker-dealers (B-D) with 2,500 collective representatives, deployed e-pad technology to their representatives in November 2005. Lynn Niedermeier, president of Invest Financial Corporation, one of the four broker-dealers under the NPH umbrella, described how their entire account creation process works:

An investment adviser logs into the B-D's Electronic Order Entry Web site. The representative selects which type of account they would like to open (say a Roth IRA) and the Web site dynamically generates the appropriate broker-dealer forms. The account forms contain logic so that certain fields are required (e.g., the client's social security number), meaning the form may not be submitted if these fields are left blank. If the firm previously opened an account for this client, then much of the data on the form is pre-populated with the client's information.

The client uses an e-pad (which plugs into the back of the computer with a USB key) to sign each of the required areas of the account form that is displayed on the computer screen. Upon completion of the form, the representative hits a submit button, and the completed form and its data are electronically transmitted using 128-bit SSL encryption to the office of supervisory jurisdiction (OSJ) for approval. The OSJ either provides its approval and submits the form to the broker-dealer or if necessary sends it back to the representative for further clarification.

NPH uses software (designed by Interlink Electronics) to combine epad signature information with account-form information. Upon submitting the form, the software "hashes the signature with data of the form using an algorithm that can tell you if there was a change to the form," according to Rod Vesling, with Interlink Electronics.

After four months of use, Niedermeier indicates one-third of Invest Financial's 750 representatives have used the e-pad technology to open 4,175 new accounts and place 5,700 orders. Because the account forms are both generated and submitted electronically, Niedermeier estimates saving 120,000 pieces of paper that neither the representative nor the B-D's back office has to scan and file.

Client reaction has been very positive. "Because they have been using e-pads in gas stations and Wal-mart, their reaction has been 'how come it has taken so long [for your industry] to change?'" Niedermeier said.

Surprisingly enough, the answer to that question is not due to compliance. According to Lynn Smelt, senior vice president of NPH, compliance was the easiest item to address in the overall goal to create an electronic account forms processing system.

Because "the data and the storage is SEC-certified according to SEC regulations 17a-3 and 17a-4," Smelt says their system satisfactorily met SEC requirements on electronic books and records.

The real issue according to Smelt was "workflow — how to recreate the process electronically; how does it affect the rep at the point of sale and the back office, how do exceptions get handled and automated?" Instead of merely replicating paper account forms, NPH built logic into the system to address areas that previously caused errors in the paper handling process. For example, rather than include all potential disclosures on a given form that the client had to either sign or indicate "does not apply," the system dynamically generates disclosures that apply for a specific form.

Michael Cox, president of MainStreet Financial Service in Minnesota (and an OSJ with United Financial Group) was a beta tester of the e-pad technology deployed by NPH. "It's the best innovative thing we've had in our office. It cuts down on mistakes, and it cuts downs on missing signatures," he said, and estimates about 85 percent of their business is handled using the e-pad technology.

Cox and Niedermeier agree that one of the biggest obstacles to overcome in deployment is advisers' resistance to change. Having used the technology right out of the box from "day one," Cox says he's received "zero objection from clients." While NPH incurred the entire cost of creating the infrastructure, Cox's only cost outlay was for the e-pads itself ($250 for the deluxe model or $80 for the basic model).

It all sounds great — but there must be drawbacks, right? Otherwise, why aren't more custodians and fund companies deploying the technology?

Smelt indicated that the e-pad deployment was the final piece of a three year project to move account paperwork processing to an electronic platform. In short, getting the back-office infrastructure in place to generate and accept forms electronically is a pre-requisite to signing forms digitally. Schwab has been using e-pad technology for some time at many retail branch offices, and State Farm and Wells Fargo recently announced deployments of e-pad technology. With investments in technology infrastructure and success stories from within the financial sector, you may soon hear that your custodian, B-D or favorite fund companies will "sign on" to digital signatures soon.

If not, then it appears the next likely question is "why not?"

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TOOLS TO USE

Interlink Electronics [BOLD BG] (**http://www.integrisign.com/**).

Digging into Technology Terms and The Law

1. What is an electronic signature? The terms "electronic" and "digital" signatures describe different things. An electronic signature is an electronic form of a handwritten signature such as a

scanned image or photograph of a signature, or a signature captured on an electronic notepad such as the one at your local grocers.

An electronic signature may have a digital signature applied to it. A digital signature is a mathematical algorithm that enables one to conclusively prove that the document has not been changed since it was signed.

There are two key properties of handwritten or electronic signatures which enable them to be used to represent an individual's "stamp of approval," the first of these being integrity. Integrity means that you can accurately display how a document looked at the time it was signed. Integrity ensures that a salesperson cannot get away with adding an extra zero to the price after the purchaser signs the sales contract.

Using a mathematical algorithm, computers are great at testing for integrity to confirm a document has not been altered since it was signed.

The second component that enables signatures to be used as a form of approval is called authentication. Authentication means that you can reliably demonstrate that the signature was not forged or copied and pasted into the document.

To perform the function of authentication, computer technology still requires a chain of trust to ensure a signature accurately reflects that of the signer. You encounter authentication when making Internet purchases. Commercial Web sites use secure certificates of authentication to ensure that the Web page on which you enter your credit card information actually belongs to amazon.com.

2. What does the law say? The Electronic Signatures in Global and National Commerce ("ESIGN") Act took effect October 1, 2000, and in short it outlines how a signature in electronic form is a legally viable means to enforce a contract or other transaction. Under the law, consumers must be given certain protections such as:

- the option of having the records provided to them in paper instead of in electronic format
- the right to withdraw their consent to have records provided to them in electronic format without incurring a fee
- the requirement to be informed of what hardware and software requirements are necessary to access the electronic records

While the act contains some exceptions and restrictions, many businesses within the financial services sector (notably credit card processors) have implemented electronic and/or digital signature technology.