W H I T E P A P E R

ELECTRONIC PRESENTATION AND E-SIGNATURE FOR ELECTRONIC FORMS, DOCUMENTS AND BUSINESS RECORDS

ALPHATRUST PRONTO™ ENTERPRISE PLATFORM

This white paper is written for senior executives, line of business managers, legal staff, risk management staff, technical managers and security managers involved in deploying electronic document solutions intended to leverage and comply with the US Federal E-SIGN law as codified in 15 USC 7001 et. seq., the Uniform Electronic Transactions Act at the US State level, the US Sarbanes-Oxley Act, Canadian provincial and Federal legislation, the EU Signature Directive in Europe, as well as other national laws and regulations globally. Industry specific regulatory compliance (in the US) includes Federal Reserve, OTS, Comptroller of the Currency, SEC, NASD, FDA, Dept. of Education, US DoD, and IRS regulations.

April 2013

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Executive Summary

Electronic forms, documents, and business records executed with electronic signatures today have the legal and commercial equivalence of paper records with handwritten signatures in most of the developed world. These online processes are decreasing the cost of business, increasing the speed at which business is done, and adding needed security to electronic business transactions. Due to the unique business requirements placed on permanent business records and signatures, business managers find that they must properly marry technology with sound processes and practices to achieve effective results (i.e. to achieve proper "internal controls" for SOX compliance).

An effective electronic record and signature solution must address these business issues:

1) Does the solution deliver the needed technical security requirements (authentication, data integrity, and technical non-repudiation)?
2) Does the solution address the business requirements for:
    a) Compliance with laws and regulations?
    b) Enforceability of transactions (legal recourse)?
    c) Acceptance by users of the solution?
    d) Using proven technology?
    e) Viability as a long term solution?
3) Does the solution provide for growth / easy scalability as the organization identifies future potential for electronic documents and records?
4) Can the solution integrate and work with existing electronic workflow and security solutions?

This white paper discusses electronic workflow in general and discusses how the AlphaTrust PRONTO™ Product Family offers superior solutions for reducing cost and capturing increased business by keeping workflow electronic and avoiding paper processes requiring manual signature or approval.

In the US, major legislation exists at the federal level (the Electronic Signatures in Global and National Commerce Act, or E-SIGN for short) and at the state level (the Uniform Electronic Transactions Act, or UETA, now passed in 46 US states, with equivalent legislation in the other 4 states) that provides for the use of electronic signatures and records in place of paper records and ink signatures. Any solution must meet the baseline requirements set out in these laws (which are almost identical).

In addition to the E-SIGN and UETA requirements, it is also important to look at the bigger picture. While you want a solution that meets legal requirements, the introduction of electronic records and signatures introduces a shift in business processes that may affect other business applications. Your electronic solution should not merely address the needs of one e-

signature application, but be capable of easily extending to other applications and areas to meet the growing needs of your enterprise, supply chain, industry, and governmental requirements.

There are several vendors of eSignature solutions on the market. AlphaTrust's strength is in its focus on both current and long terms needs with a breadth and depth of solutions unmatched in the marketplace:

- Web-based, server-based, and desktop systems for diverse work flow requirements. Deployments may be in house or hosted by AlphaTrust (options include perpetual licensing, transactional licensing, dedicated hosting, and software-as-a-service).
- Fully customizable work flows and branding to meet your needs rather than forcing you into a vendor's one-size-fits-all process.
- Management and control of your documents throughout their lifecycle so you can maintain the all important "chain of custody" including full audit trail details. It is not enough just to have e-signed document files produced by an eSignature system. You need to be able to prove them up often years down the line.
- Ease of integration with other business processes and document management systems.
- A vendor that is financially sound with a long term history of consistent growth and profitability. AlphaTrust is privately owned, debt free, profitable, and focused meeting your current and long term needs. Signed documents are important long-term business records. Working with a vendor with that long term focus is an important consideration.

AlphaTrust's PRONTO™ Product Family of software products and services meet the requirements for the creation of legally enforceable electronic business records today and is architected with the flexibility to meet even larger global requirements in the future. In production use since 2001 with a wide variety of applications, PRONTO™ Products provide proven technology for meeting these requirements today.

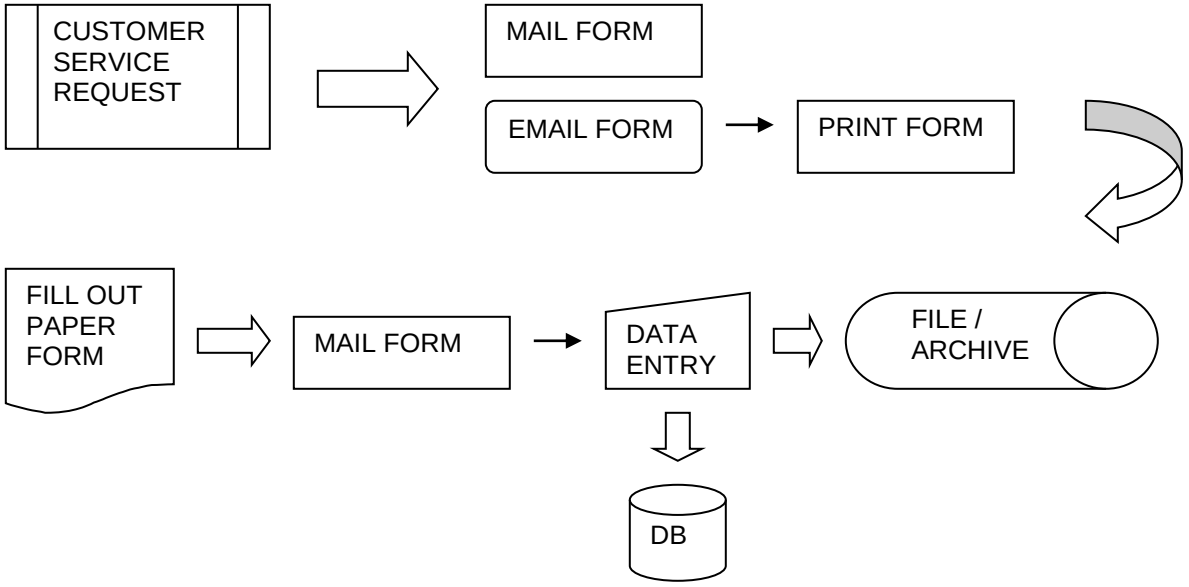
Electronic Document Workflow

Electronic document workflow processes generally fall into two types:

Type 1 – Static: static workflow starts with static documents (typically forms and applications such as new accounts applications, customer service requests, and standardized forms). Data from static documents usually end up in databases while the documents themselves become part of a file or archive.

Type 2 – Dynamic: dynamic documents typically start from templates but are customized for each requirement (e.g. contracts). Dynamic documents typically go through multiple draft and revision cycles before being ready for execution or approval.

Type 1 – Static Document Workflow Example:



Whether customer services requests originate from mail, telephone or Web inquiry, paper forms are sent to the customer for completion, signature, and return. This process can take seven to fourteen days and have direct costs of $5 to $50. Non-response rates vary with the application, but result in lost business.

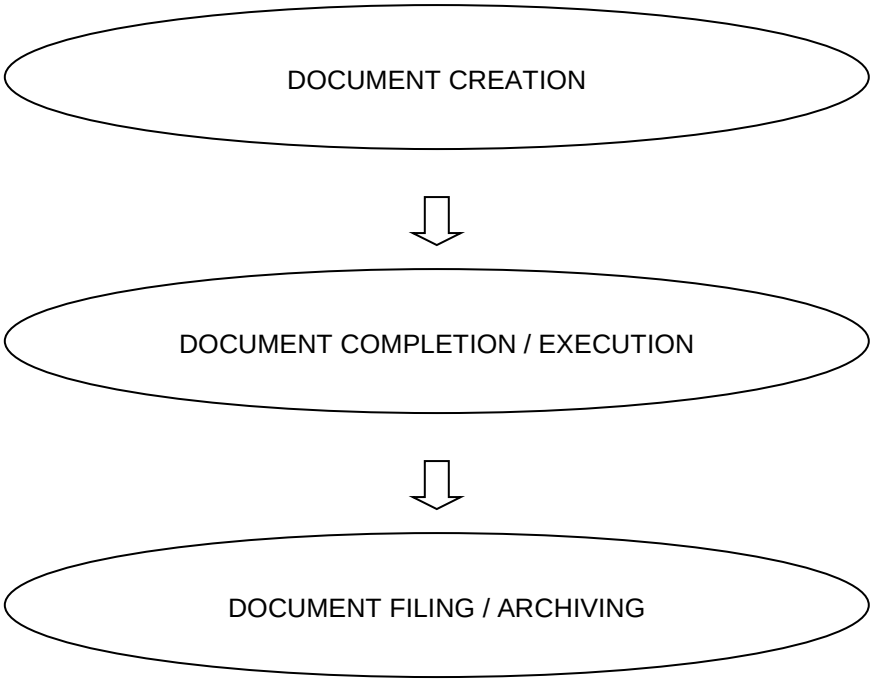
Type 2 - Dynamic Document Work Flow Example:

Contracts require a fair amount of documentation and collaboration. The documents themselves typically go through several draft and revision cycles. These documents are often sent via email.

Using PRONTO™ Enterprise Platform software, or PRONTO™ Online, you can design a Web-based workflow that dynamically creates documents and presents them for acceptance and signature, while maintaining a full audit trail, central control and archiving of documents.

Where do PRONTO™ Products fit in business processes?

Paper
Web
Word Processing
CRM / ERP / CMS



PRONTO™
Server/Online

PRONTO Server™
Online Storage
HSM
Paper Files

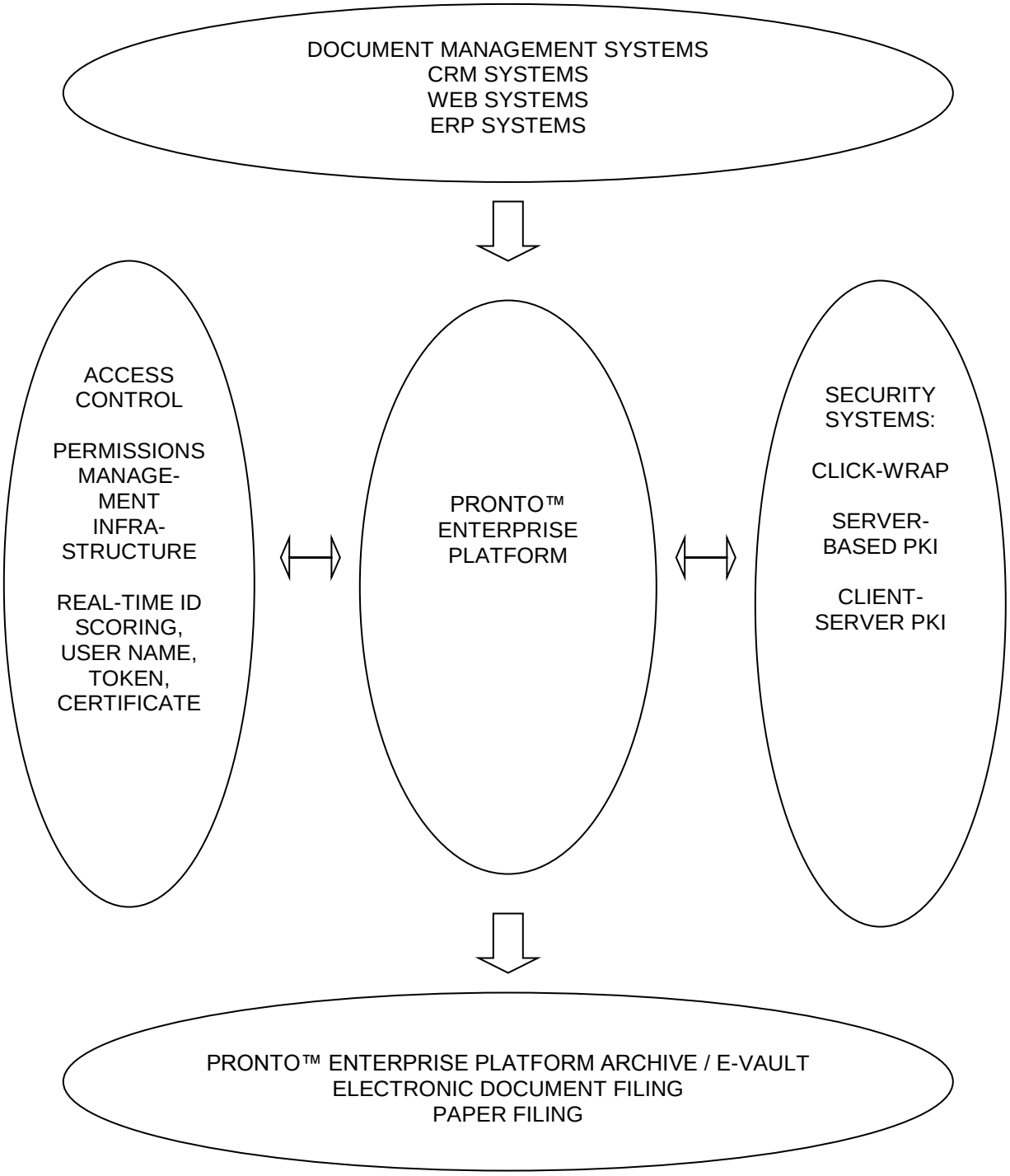
PRONTO™ Enterprise Platform manages the completion, execution, and storage phase of document processes, whether a single document, single-signer transaction or a complex closing involving multiple documents and multiple signers. PRONTO™ Enterprise Platform uses Web and email processes to manage the complete execution cycle for a transaction. The result is a completed document set for the transaction in fully electronic form. Completed documents may be transmitted, filed and archived electronically or printed for paper filing. PRONTO™ Enterprise Platform archives all completed documents within its database archival purposes.

PRONTO™ Enterprise Platform supports multiple user authentication methods to identify signers and jurisdictional rules management to deal with the various requirements imposed by special regulations or state rules, especially in the area of consumer consent and disclosure.

PRONTO™ Enterprise Platform is an essential part of an e-business infrastructure and can integrate and interoperate with document management systems and security systems (see technical overview).

Technical Overview

Full e-Business Integration Example:



ARCHITECTURE - PRONTO™ Enterprise Platform Software

PRONTO™ Enterprise Platform software is a server-based document execution and transaction system. It is available as a cloud service, or for on-premise installation. PRONTO™ Enterprise Platform is designed to address three important classes of use cases:

1) Straight Through Processing, referred to as "STP" below,
2) General Business Process Workflow, referred to as "Workflow" below, and,
3) Ad-hoc or On-Demand work, referred to as "Ad-hoc" below

Straight Through Processing ("STP")

STP use cases have these characteristics:

- Process control is critical
- Focus is on system generated documents
- Direct integration with upstream document generation systems
- Direct integration with downstream operations and archival systems
- Achieves "no touch" end to end paperwork automation - STP
- Very high process quality and large reduction in human processing and intervention
- Requires a formal project: analysis, integration, deployment
- Owned by IT or Operations

For STP cases, your applications communicate with PRONTO™ Enterprise Platform software via an industry standard Web services.

General Business Process Workflow

Workflow use cases have these characteristics:

- Process control is important
- Differs from a core process in that it does not justify a formal integration project (needs a "no code" approach)
- May or may not connect to upstream and downstream systems
- May use system generated, process generated, or user generated documents
- Achieves "low touch" end to end paperwork automation
- High process quality and good elimination of human processing and intervention
- Typically uses an informal project: analysis, process creation (using tools), deployment to end users
- Implemented typically by a business analyst or process engineer using design tools and configuration

The principal difference between an STP approach and a general Workflow approach is that you don't need integration and developer / IT resources for a Workflow use case. PRONTO™

Enterprise Platform provide the tools, access via a Web browser, for designing, testing, and publishing workflows for other users to use.

Ad-Hoc Work

Ad-Hoc work use cases have these characteristics:

- Process control is less important, or managed elsewhere
- User defined and controlled (i.e. send a desktop document for signature)
- Relies on end user to define a template or use a one-off ad hoc approach
- Uses user generated or managed documents
- No or minimal data collection required, no or low data validation, no processing rules
- Not integrated with other systems
- Achieves avoidance of direct handling of paper (fax, mail) but low elimination of human processing and intervention
- fast to deploy

The Ad-hoc approach is what most people have had exposure to if they have used eSignature tools at all. The approach here typically is to upload a document you would like to send for signature, tag signature locations, enter recipient names and email address, and send for signature. This approach has its place but it only achieves the tactical benefit of getting a document signed faster, and depends on the tool user to get everything right (no process control).

The strength of PRONTO™ Enterprise Platform is in the power to address all of these use cases along with the flexibility to deploy in house or be consumed as a cloud service.

Transactions in PRONTO Enterprise Platform

The basic unit of work for PRONTO™ Enterprise Platform is a transaction. Each transaction is defined as one or more participants that need to perform tasks against one or more documents. These tasks may include review, approval without signature, eSignature (including initials were needed), form completion, or secure delivery and receipt.

Each participant is authenticated using one of a number of access control methods before being allowed to perform tasks. PRONTO™ Enterprise Platform communicates with signers via Web and e-mail interactions. PRONTO™ Enterprise Platform users are defined as either registered or unregistered users. Examples of registered users are employees, vendors and existing customers. Registered users may be authenticated using single sign on via federated authentication or with a defined user name and password. Examples of unregistered users are new customers and one-time transactional users.

Additionally, registered users have a signature profile, may use a registered bitmap image of their handwritten signature, have access to documents they have signed in the PRONTO™

archive and have access to other features not available to unregistered users. Unregistered users may either be unauthenticated, be authenticated with a one-time transactional password, or use challenge-response knowledge-based authentication (KBA) via third party providers.

Documents processed by PRONTO™ Enterprise Platform are typically stored and managed as HTML documents or as PDF documents. Even though some documents may originate in proprietary formats such as Microsoft Word, it is more effective to convert them to a native HTML or PDF format prior to execution, which can be done automatically. Industry groups have studied their long term requirements and concluded that the open, standard HTML or PDF formatted documents best meets the need for permanent electronic documents. The reasons are many. Both HTML and PDF:

1) Are open standards.
2) Will be long lived and supported.
3) Support data embedding and mining.

For example, the mortgage industry has a 37.5 year archive requirement. There is concern with using proprietary formats such as Word files as to whether old file versions will be supported more than a few years out. Additionally, such formats often use "active content" technologies (which means the documents are programmable), which can cause them to be unenforceable. PRONTO™ Enterprise Platform natively supports and is designed with the requirements of HTML and PDF documents in mind. Additionally, the trend in government applications, such as online filing, is to accept only open document standards including text, HTML and PDF (including PDF/A). So, while other document formats are very useful for document creation, they can have serious drawbacks as permanent document formats.

Document integrity – once a document is signed, the signer's electronic signature in the form of a signature block is inserted into the document, and the document is "sealed" with a digital signature. The digital signature provides evidence of document tampering or alteration after signing. This is an essential security requirement for any enforceable digital document. Digital data can be easily and undetectably changed. Digital data protected with a digital signature has a tamper evident seal. If the data is changed after signing, it can be easily detected.

When deployed on customer premises, PRONTO™ Enterprise Platform is provided as server-based software running on Windows Server 2008 / R2. It easily integrates with Web processes operating on UNIX, Linux, or mainframe applications using a Web services programming interface (WS-*).

PRONTO™ Enterprise Platform is also available as a cloud service hosted by AlphaTrust. Customers may use our standard multi-tenant software-as-a-service offering, or may subscribe to a custom Dedicated Managed Service (single tenant SaaS). With either cloud service there is no software to buy. AlphaTrust will manage the entire process. If you choose the dedicated

SaaS option, you may migrate from the cloud to your own on-premise deployment when needed.

ELECTRONIC SIGNATURES AND DIGITAL SIGNATURES

You have likely heard these terms used interchangeably. In reality, they are very different, and the fact that both terms use the word “signature” has caused confusion.

An electronic signature is a legal concept for using an electronic symbol to represent a person's volitional consent to be bound to the terms of a document. What you must achieve with any business process that requires an enforceable document, is to obtain a legally-valid electronic signature for that document using the proper processes. This is what the PRONTO™ Family of Products is designed to do.

A digital signature is a technical security concept for a data integrity process using cryptographic data hashing and encryption. Simply applying a digital signature process to the data of a document will generally not result in an enforceable electronic signature. Digital signatures are a very important security tool and PRONTO™ Enterprise Platform uses digital signature technology in its electronic signature processes.

PRONTO™ Enterprise Platform uses cryptographic security technology. In its standard configuration, PRONTO™ Enterprise Platform uses its own server cryptographic signing keys to apply the required digital signatures (“digital seals”) to documents. In this configuration there is no requirement for a public key infrastructure. PRONTO™ Enterprise Platform may be integrated into a PKI, if required. PRONTO™ Enterprise Platform can support both software key sets and hardware key sets. PRONTO™ Enterprise Platform manages all documents securely on the server during the signing process. There is no opportunity for a signer to alter a document presented to them for signature. Once a signer has indicated their consent to sign, by clicking in appropriate locations in a document, PRONTO™ Enterprise Platform software will insert their signature block into the document, seal the document with a cryptographic digital signature and records the details in an audit trail.

DISPUTE RESOLUTION AND ADMISSIBILITY

Electronic signature laws do not require the use of the processes and security measures employed by PRONTO™ Enterprise Platform, but they are invaluable in establishing best practices, data integrity, and chain of custody. In the event an electronically signed document is disputed the most likely challenges to the document will be one of these:

1. It wasn’t me. I did not sign that document.
2. I signed a document, but that is not the one I signed. It was changed.

PRONTO™ Enterprise Platform will provide the following information to assist in refuting these claims:

- A time-stamped audit trail of document review and signing.
- A record of the Internet IP address of the signer.
- Authentication methods used to identify the signer.
- The actual signed document with cryptographic verification that the document has not been altered since it was signed. This is accomplished by verifying the cryptographic, time-stamped, digital signature of the document.

In addition to this information, your business process will also have additional evidence that weighs on the case. Examples include user authentication employed, for example by a customer portal application, and "course of dealing" history, i.e. how the parties acted before and after the transaction.

DOCUMENT DATA INTEGRITY

One of the key security elements of a document processed by PRONTO™ Enterprise Platform is the digital signature computed for each signed document. In a standard deployment of PRONTO™ Enterprise Platform each document, whether in HTML or PDF format, is hashed and digitally signed including a time stamp. The data comprising the digital signature is stored in the database used by PRONTO™ Enterprise Platform. Web links are also embedded each document that, when clicked, will link to a Web page that produces the audit trail and verification information for the digital signature. In addition, copies of signed documents not stored within PRONTO™ Enterprise Platform may also be verified using programming interfaces provided by the software.

As an optional step, and only for PDF formatted documents, an additional cryptographic digital signature may be embedded in the PDF document itself. This PDF digital signature may then be independently verified by products such as Adobe® Reader or Adobe® Acrobat on a standalone basis, without any link to the original PRONTO™ Enterprise Platform database. Key audit trail data is also embedded as metadata in the PDF document.

CLIENT-SIDE REQUIREMENTS

One of the strengths of the PRONTO™ Enterprise Platform architecture is that the only user software requirement is a Web browser. PRONTO™ Enterprise Platform does not use any client side software, plug-ins, Java code, ActiveX controls, or similar technology. It supports wireless touch devices such as smart phones and tablets, as well as standard PC and Mac computers. When using the optional client-side digital certificate capability PRONTO™ Enterprise Platform requires Internet Explorer v7.0 or higher on the desktop. Adobe Acrobat® Reader v6.0 or higher is required for viewing signed Adobe® PDF documents, but is not required for the review and signing process.

SYSTEM REQUIREMENTS

For on customer premise deployments, PRONTO™ Enterprise Platform operates on Windows Server 2008 / R2 servers connected to an MS-SQL Server database.

GETTING UP AND GOING THE EASY WAY

We understand the business, technical, and legal requirements for successful deployments of electronic signatures as well as wider document processing projects. You tell us your business objectives and we will deliver those results.

SUMMARY

AlphaTrust's PRONTO™ Enterprise Platform is designed from the ground up to meet the requirements for technical security, transaction enforceability, legal and regulatory compliance.

AlphaTrust offers the clear solution for meeting the challenge of UETA, E-SIGN, SOX, EU Directive and other electronic record and electronic signature requirements, no matter what the application requirement. We welcome the opportunity to work with you to meet your specific business needs.