The Electronic Signature Market Is Poised to Take Off

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Growth in the e-signature market is becoming viral, and there are significant benefits to adoption for those organizations that plan ahead.

Impacts

- Enterprises' and consumers' recognition of the benefits gained from adopting e-signature software and services has led to 48% growth in this market in 2011.

- The ease of implementation of the software as a service (SaaS) delivery model will continue to drive adoption of e-signatures and will establish SaaS as the predominant global e-signature delivery model.

Recommendations

- Analyze potential operational efficiency gains, compliance benefits, user convenience improvements and potential new business gains by automating the processes requiring signatures.

- Inventory enterprisewide e-signature requirements to guide vendor selection decisions and contract negotiations.

- Assess integration needs, signature method requirements, and enterprise user and transaction volumes. These assessments will help with project cost and time estimates.

- Involve the line of business and legal staff upfront to identify the right balance for compliance, usability and cost.

Strategic Planning Assumption

SaaS-based offerings will be used for 50% of all e-signature purchases by 2014, compared with less than 5% in 2009.

Analysis

Gartner client inquiries on the topic of electronic signature doubled during the last two years. This trend complements vendors' reports of an increased customer base and increased revenue. Enterprise adoption grows organically as consumers and enterprises become more familiar with and accept e-signatures. More industries and lines of business are supporting this growth. Insurance, banking and investment sectors still lead the way, with government needs trailing. However, contract, agreement and waiver signing are needed by most industries, and represent a larger, more-general-purpose pool of customers with needs. Cross-industry needs for internal approvals and HR form signing also contributed to market growth.

Figure 1. Impacts and Top Recommendations for the Electronic Signature Market

Impacts	Top Recommendations
Enterprises' and consumers' recognition of the benefits gained from adopting e-signature software and services has led to 48% growth in this market in 2011.	• Analyze potential operational efficiency gains, compliance benefits, user convenience improvements and potential new business gains by automating the processes requiring signatures. • Inventory enterprisewide e-signature requirements to guide vendor selection decisions and contract negotiations.
The ease of implementation of the SaaS delivery model will continue to drive adoption of e-signatures and will establish SaaS as the predominant global e-signature delivery model.	• Assess integration needs, signature method requirements, and enterprise user and transaction volumes. These assessments will help with project cost and time estimates. • Involve the line of business and legal staff upfront to identify the right balance for compliance, usability and cost.

Source: Gartner (May 2012)

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The overall market for e-signature software and services grew from a revised estimate of $111 million in 2010 to $164 million in 2011 — a 48% compound annual growth rate. Based on the increase in Gartner client interactions on the topic, and revenue projections, 2012 will likely have similar market growth.

Signatures remain small, but important, components of myriad business transactions. Signature requirements can be found in internal and external interactions, but are most sought as formal components in transactions among parties in different organizations. Prior to e-signature adoption, enterprises have had to keep many processes paper-based, or have been forced to implement processes that were partly automated and use paper, fax, and postal and shipping services to complete transactions.

The use of e-signature software or services can greatly improve operational efficiencies, help drive new business and create a more convenient experience for signers. Many organizations have adopted commercial and homegrown e-signature solutions to great benefit. However, the e-signature market remained small through 2010. Since then, momentum has been steadily building, owing much of the recent adoption to the increasing availability of functionally capable and economically attractive SaaS offerings that can be used by individuals, businesses and other organizations.

Individuals' initial experiences with e-signature services are most often due to being downstream parties to transactions. As the number of individuals exposed to the positive experiences of this "new" method of signing grows, these users begin to expect easy-to-use e-signature capabilities for other transactions, contracts and agreements, and they begin to recommend and adopt these solutions for enterprise use.

Recommendations:

- Analyze potential operational efficiency gains, compliance benefits, user convenience improvements and potential new business gains by automating the processes requiring signatures. Highlight findings. Common business benefits include:

  - Reduced postage, shipping, paper and printing costs

  - Reduced process cycle time

  - Reduced or avoided personnel costs

  - Speed to close business — agility and competitive advantage

  - Customer convenience — attracts and retains customers

  - Improved ability to audit processes and transactions for compliance and nonrepudiation

- Inventory enterprisewide e-signature requirements to guide vendor selection decisions and contract negotiations.

SaaS e-signature solutions have made inroads to enterprises, often through sales, HR or legal departments that need to have external parties sign documents. IT often finds out about this ad hoc usage after the fact. However, once someone with a broader enterprise perspective identifies other business needs for signature automation, then a service or software can be more effectively leveraged for better pricing and to bring consistency to similar processes.

Conversely, many organizations with automated systems that could benefit from the addition of e-signatures will do so without buying a stand-alone solution. If the e-signature function is the only missing function from custom or commercial off-the-shelf applications that are otherwise automated, then these systems may only need to be slightly augmented to automate the "last mile" of the e-signature subprocess. Therefore, no stand-alone e-signature solution is needed (see Note 1)*.* It is when further analysis is done on other lines of business that need signature automation, and when these other needs are not serviced by the initial target application, that the value of an abstracted e-signature solution becomes clearer. Something that is reusable and provides

consistent, secure, convenient and economical service to multiple business process becomes more valuable as its reach expands.

Enterprises seeking to buy software or services will find that all market solutions can meet the fundamental requirements for users and systems to transmit documents to be signed, list and notify signatories, authenticate signers, enforce signing order as part of a workflow, present documents to be signed, execute the signature using a "click to sign" approach, deliver the signed records back to users or systems, and provide transactional proof.

The following functional areas may highlight needs for specific vendors' offerings:

- Use of handwritten signatures with specialized signing pads, or specific brands of tablets or smartphones

- Use of digital signatures with client-device-resident private keys

- Integration with specific enterprise content management, ERP or CRM systems

- Integration with specific SaaS applications

- Integration with Microsoft Office products

- Supporting email clients for document transport and signing

The following vendors have SaaS offerings: Adobe, AlphaTrust, AssureSign, Dictao, DocuSign, eLynx, Keynectis, RightSignature, RPost, Sertifi and Silanis. DocuSign continues to build its lead in North America and has established a beachhead in Europe. It has added capabilities to the service and its representational state transfer (REST) API that provide customers with integration flexibility and has established integrations with many on-premises and cloud-based applications. Adobe purchased EchoSign in July 2011, when EchoSign was second in market share. The rest of these vendors follow DocuSign and Adobe with relatively low market share. However, the business climate remains positive, and customer gains have been had by all.

Silanis has been a leader in providing on-premises electronic signature software and implementation services, and has particular strength in North American financial service and government verticals. In the past 18 months, it has offered a dedicated hosted version of its software, a SaaS product that is based on the IBM LotusLive platform, and a stand-alone SaaS offering.

AssureSign offers SaaS and on-premises editions of its e-signature capabilities, and the code base is the same. This can offer customers flexibility in choosing and changing deployment models with minimal changes to systems that interface with AssureSign's software or service.

SIGNiX offers a hosted service that is dedicated and can be customized for each client. Unlike the other North American services, SIGNiX completely uses digital signatures for its signing processes. SIGNiX manages the key pairs used for signing so that customers don't have to deal with issues of key management on endpoint devices. European providers, Dictao's and Keynectis' SaaS offerings use digital signatures too.

Softpro and xyzmo SIGNificant should be considered for organizations that require a solution that supports handwritten, biometrically enabled e-signatures, with e-signature comparison capability and with integration requirements for dedicated signature pads and newer tablets and phones. Xyzmo has strength in the retail industry, and Softpro in banking.

Enterprises that favor a pure public-key infrastructure (PKI)/digital signature approaches should consider Algorithmic Research (ARX), Dictao and Keynectis.

RPost stands out for its email use-case support.

The ease of implementation of the SaaS delivery model will continue to drive adoption of e-signatures and will establish SaaS as the predominant global e-signature delivery model

Most e-signature SaaS adoption has come from North America (see "In the North American E-Signature Market, SaaS Offerings Are Increasingly in Demand"). Other geographies and jurisdictions have been slower to adopt SaaS services, primarily due to signature laws that tend to favor PKI-backed digital signatures. These laws may require that qualified certificates from specific certificate authorities be used and that the private keys associated with these certificates be stored on "secure signature creation devices" (SSCDs), usually smart cards. Despite advances by some countries with national ID rollouts (IDs that can support digital signatures), lack of reader infrastructure, costs and inconvenience have severely inhibited this approach to conducting transactions requiring signatures. "Soft certificate" approaches that store keys on endpoint devices, but don't require SSCDs, also provide an inconvenient and often untenable solution, because the signing keys are often not available on the devices users are using to conduct transactions. The increase in mobility requirements and the need or desire to sign anywhere from any device are further inhibiting digital signatures for consumer transaction signing (see Note 2).

Click-to-sign, and, in some cases, handwritten digitized signature approaches, will generally be favored in cases where there are no regulations requiring digital signatures. SaaS e-signature offerings have laid solid foundations that provide authentication, integrity and nonrepudiation qualities needed for conducting transactions:

- Services increasingly offer multiple authentication methods for customers with different risk profiles.

- Identity-proofing services are offered through partnerships, or customers can make their own arrangements.

- Services collect and log a variety of contextual information, such as signer's email address, date and time of transaction, IP address of the endpoint device, and geolocation (if available). Social profile (if a social network authentication is used for signing onto the e-signature service) can also yield additional information to link the signer's identity to the transaction record. All available contextual information is logged for different steps in the transaction process.

- Mobile devices and applications that can support finger- or stylus-based signing are also increasingly supported and can add contextual evidence to a transaction. For example,

geolocation data can be added when made available, and camera-equipped devices can support adding signers' photographs to the data stored as part of the transaction.

- Services encrypt and can digitally sign final form documents for integrity purposes.

These controls have passed muster in U.S. courts, and SaaS models are being adopted in common-law countries, such as Canada, the U.K. and Australia. Gartner believes that this trend will continue, and that SaaS delivery will predominate worldwide. Jurisdictions or industries that require digital signatures may be satisfied by SaaS offerings that issue and leverage individual user certificates for digital signature, but these vendors will manage these certificates and private keys centrally. This will make the user experience essentially the same as the established click-to-sign approaches, and would not require keys to be held on endpoint devices or smart tokens. European digital signature software vendors that offer SaaS delivery models have indicated that new customers are becoming interested in SaaS delivery with centrally managed keys for digital signature.

SaaS e-signature vendors also continue to grow the ecosystem of business applications and platform services they integrate with. Enterprise content management, ERP and CRM systems are common integration targets. Enterprise adoption of SaaS applications further pushes SaaS e-signature vendors to integrate with these Web applications. SaaS e-signature vendors' Web services APIs have become more capable and allow customers to do more than the baseline of sending and receiving documents between themselves and the service. Document templating, workflow and audit functions are also accessible.

Despite the trend to adopt SaaS delivery models, a significant minority of the market will still be served by on-premises software solutions. Some Gartner clients prefer not to have a third party involved in transactions because of intellectual property, privacy or security concerns. These organizations may also have an established capable development organization, and have plans to maintain this capability. Further, these organizations will have a firm understanding of the number of systems and transactions that will be completed over time, and they are able to negotiate a more favorable contract for software. Use of dedicated function signature pads for capturing and comparing handwritten signatures, particularly in retail environments, has also driven on-premises software solutions. Although as tablets and phones can support handwritten signature capture proliferate, the need for dedicated signature pads will likely decrease.

Recommendations:

- Assess integration needs, signature method requirements, and enterprise user and transaction volumes. These assessments will help with project cost and time estimates:

  - Integrating on-premises and SaaS applications with e-signature software or services will add project time and costs to projects. These may be reduced when the vendor has prebuilt integrations.

  - Use of biometric handwritten signatures requires devices and software that are biometric-capable. These devices add costs, unless these costs are sunk as part of a tablet or phone deployment for other purposes.

- Software and SaaS vendors have pricing models that include user volume (transaction initiators) and transaction volume components. There may also be baseline fees and integration fees. Costs can be predicted over time to the extent that enterprises can anticipate user and transaction volumes.

- Involve the line of business and legal staff upfront to identify the right balance for compliance, usability and cost:

  - Legal requirements may dictate identity proofing, service authentication and signature method requirements.

  - Line-of-business staff will have the best input for use case, ease-of-use requirements and costs versus ROI.

Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"In the North American E-Signature Market, SaaS Offerings Are Increasingly in Demand"

Evidence

Gartner client interactions and e-signature vendor surveys were used as a basis for this research.

Note 1 Do-It-Yourself Solutions Can Be Sufficient

Gartner recently discussed e-signature requirements with a client in the banking industry. The bank had developed a customer portal and a set of online services for its customers. A loan application process was the only function currently requiring a signature, and the otherwise automated process had to go to paper and mail, or personal presentment at a bank branch when signatures were needed. The portal and associated systems already had identity administration and authentication capabilities. The bank already "knew" its customers through the account opening processes, and the system created an audit trail for every action a customer took. All that remained was to automate the forms presentment and signature process. The bank reasoned that there were no other applications outside the confines of the customer portal implementation that would need e-signatures in the near term, and they elected to augment the current system with these presentment, form-filling and click-to-sign functions, rather than seek a software or SaaS solution.

Note 2 Europe's Experience With Digital Signatures

The European Commission began a public consultation on the adoption of e-signatures in Europe with an eye toward potentially changing the European Electronic Signature Directive ([Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures](#)). The directive did not strictly require PKI-backed digital signatures for all types of transactions, but strongly indicated their usage. Most European state governments adopted digital signature approaches, several of them strongly favoring SSCDs.

However, adoption has been inhibited during the past decade, and European clients have increasingly indicated that other forms of electronic signature are being used, or that digital signatures with centrally provisioned and managed keys are being favored over SSCD or endpoint soft certificate approaches. No recommendations have been published yet by the European commission, but Gartner believes that digital signature approaches using centrally managed keys and other forms of electronic signature will be more strongly recognized. This must happen to reflect reality in the marketplace. Approaches that facilitate commerce will win over those that inhibit commerce.

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