



NYSERDA

Implementing Electronic Signature Solutions

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 - Determine Whether, Where, And How To Replace Remaining, Required Wet Signatures With Electronic Signature Solutions
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Methodology, Framework & Approach – High-Level

1. **Inventory** existing wet signatures (+ initials and notarizations) required on forms / applications.
2. **Analyze** existing wet signatures (+ initials and notarizations).
3. **Eliminate** any unneeded existing wet signatures (+ initials and notarizations) – without adding risk.
4. **Determine** whether, where, and how to replace remaining, required wet signatures (+ initials) with electronic solutions.
5. **Optimize** workflow in the case where an existing wet signature (+ initials and notarizations) can't be transformed into an electronic solution, for whatever reason(s).

Overarching Parameters Regarding The Development & Introduction Of Electronic Service Delivery

According to **ESRA** (Electronic Signatures and Records Act), **government entities must:**

- **Ensure** that citizens can access records as permitted by law and receive copies of them in paper form.
- **Accept** hard copy documents for submission or filing, unless otherwise required by law.
- **Not require** someone to submit or file records electronically, unless otherwise provided by law.

Business Analysis & Risk Assessment Are Required

It is extremely important to bear in mind that **governmental entities must conduct and document a business analysis and risk assessment** when electing to use or accept an electronic signature solution.

- **Business analysis and risk assessment is** defined by ESRA regulation as:
“**identifying and evaluating various factors** relevant to the selection of an electronic signature for use or acceptance in an electronic transaction. Such factors include, but are not limited to, **relationships between parties** to an electronic transaction, **value of the transaction**, **risk of intrusion**, **risk of repudiation** of an electronic signature, **risk of fraud**, **functionality and convenience**, **business necessity** and the **cost** of employing a particular electronic signature process.”

Business Analysis & Risk Assessment Are Required

Is there a business need for a wet signature?

- **Signatures are often used on paper documents for authentication, security, or other purposes even if they are not legally mandated.** For instance, it may be necessary or desirable to document through the use of a signature that a party to a transaction **attested** to the accuracy of the information provided, **agreed** to certain conditions, and / or **read and understood** related documents.
- **In some cases, system security, audit, and program management issues may require an electronic signature.** Higher risk transactions may also need the level of protection against fraud or repudiation provided by certain types of electronic signature solutions.

Business Analysis & Risk Assessment Are Required

Is there a legal requirement for a wet signature?

- **The law (statutes or regulations) can require that an application, form, document, etc. capture a signature.** The Statute of Frauds requires certain contracts and other documents to be in writing and others to be in writing and signed to be enforceable.
- **Specific federal, state, and local government laws and regulations require signatures for certain transactions.**

Identifying Signature Type

A signature can serve the following business and legal purposes:

- **Demonstrate intent:** A signature identifies the signer and signifies that the **signer understands and intends to carry out** whatever was stipulated in the document that is signed.
- **Authentication and approval:** A signature **authenticates a document** by linking the signer with the signed document. A signature may also express the signer's approval or authorization of the signed document and what it contains, and his or her intent that it has legal effect. The signature provides evidence that the signer really **did** something and actually **saw and approved** a particular document at the time of signing.

Identifying Signature Type

A signature can serve the following business and legal purposes:

- **Security:** A signature is often used to **protect against fraud, impersonation, or intrusion**. For instance, to a limited degree the signature on a check is a form of security because drafting an unauthorized check often requires forging a signature.
- **Ceremony:** The act of signing warns or puts the signer on notice that he or she may be **making a legally binding commitment**. A signature should force the person to deliberate over the document and become aware of its significance before making it final.

What Is An Electronic Signature?

What is an electronic signature?

- ESRA, at §302 (3), defines an “electronic signature” as:
 - **an electronic sound, symbol, or process**, attached to or logically associated with an electronic record and executed or adopted by a person with the intent to sign the record.

This definition affords the parties to an electronic transaction the greatest possible flexibility in selecting an appropriate electronic signature solution.

What Is An Electronic Signature?

ESRA also sets some parameters on what constitutes an electronic signature:

“An electronic sound, symbol, or process. . .”

- **ESRA provides that a very wide range of digital objects may serve as an electronic signature.** These objects can be as simple as a set of keyboarded characters or as sophisticated as an encrypted hash of a document’s contents.
- **ESRA also allows a process to serve as an electronic signature.** A process can create an electronic signature when a system used to create a signed electronic record associates the recorded events of accessing an application with the content to be signed, thereby creating a virtual record of the signer’s actions and intent. Often such signing processes also utilize a password, PIN, or other digital object for authenticating the signer.

What Is An Electronic Signature?

“Attached to or logically associated with . . .”

- A wet, inked signature becomes part of the physical paper document and remains with it during transit and after it is filed. Under ESRA, an **electronic signature is considered to be “attached to or logically associated with an electronic record” if the electronic signature is linked to the record during transmission and storage**; a digital signature can be a discrete digital object that is part of the document in the same manner as an ink signature or it can be an object associated with the document through an embedded link, or maintained separately but logically associated with the record through a database, index, or other means.
- **Under ESRA the attachment or logical association between the signed record and signature must be created at the point a record is signed**, maintained during any transmission of the signed record, and retained as long as the signed record is needed and retained.

What Is An Electronic Signature?

“Executed or adopted by a person with intent to sign the record.”

- **A signature identifies the signer and signifies that he or she understood and intends to carry out** whatever was stipulated in the signed document, warning the signer that he or she may be making a legally binding commitment.
- **ESRA requires that an electronic signature be accompanied by the same intent as the use of a signature affixed by hand.** ESRA does not require any specific level or method of signer identification or authentication. Therefore, governmental entities are free to select an identification and authentication method that meets their needs. The selection of an appropriate approach to identify and authenticate signers is one of the considerations in selecting an electronic signature solution.

Ensure Clarity & Capture Of Signer's Intent

A signer's intent can be captured in a number of ways. A number of simple practices can help avoid confusion regarding a signer's intent:

- **Afford** the signer an opportunity to review the document, prior to signing.
- **Make** it impossible for an electronic signature to be applied to a document without the signer having been informed that a signature is being applied.
- **Format** an electronically signed record to contain the same accepted signature elements captured in a paper record (in the same general position).
- **Allow** the signer's intent to be expressed as part of the record or in a certification statement submitted with and linked to the signed record.
- **Require** the signer to act affirmatively to indicate assent to the document being signed. For example, deploy an "Accept" or "Reject" button.
- **Record** the date, time, and fact that the signer indicated his or her intent and retain this information for evidentiary purposes.

Ensure Clarity & Capture Of Signer's Intent

Below is an example of a generic signature attestation / affirmation statement:

I agree, and it is my intent, to sign this document by (describe the electronic signature solution used) and by electronically submitting this document to (name of recipient individual or entity). I understand that my signing and submitting this document in this fashion is the legal equivalent of having placed my handwritten signature on the submitted document and this affirmation. I understand and agree that by electronically signing and submitting this document in this fashion I am affirming to the truth of the information contained therein.

Electronic Signature Solutions

Electronic signature solutions:

- Click through or click wrap
- Personal Identification Number (PIN) or password
- Digitized signature / signature dynamics
- Biometrics
- Shared private key (symmetric) cryptography
- Public / private key (asymmetric) cryptography
- Microchip devices
- Hybrid approaches (combining two or more of the above solutions)

Electronic Signature Solutions

A range of solutions exist to enable electronic signing, most methods of creating an electronic signature involve one or more technologies, credentials or digital objects, and processes;

- Different solutions provide varying levels of security, authentication, record integrity and protection against repudiation.
- The solutions on the previous slide are roughly organized from the lowest to the highest level of security, authentication, record integrity and non-repudiation
- Each solution can be implemented in various ways and can be combined with techniques from other solutions to increase the strength of desired attributes.
- The ultimate selection of an electronic signature solution or combination of solutions for use in a governmental transaction will involve the weighing of various factors, including public policy and legal concerns that might relate to the use of certain technologies or processes.

Inventory Existing Wet Signatures

1. **Inventory** existing wet signatures required on forms / applications.
 - Create a table to keep track of existing wet signatures (+ initials and notarizations) - keep focused on making the inventory complete and exhaustive – rather than on coming up with solutions at this point!
 - Name of form? Page of form? Where on form?
 - Last revised?
 - Part of what program?
 - Is it signature only or signature and date?
 - Initial notation only or signature?
 - Is there a notarization requirement?

Inventory Existing Wet Signatures

	Name Of Form?	Page # On Form?	Last Revised?	Program Name?	Initial Notation?	Notarization Required?
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						

Analyze Existing Wet Signatures

2. **Analyze** existing wet signatures (+ initials and notarizations).
 - **Determine actual business need** / purpose of each existing wet signature (signature type).
 - **Determine current risk mitigation** (if any) that each existing wet signature provides.
 - **Determine any legal basis** for requiring existing wet signatures (or notarization).
 - Is a signature legally required? Is there a law (local, state, federal) that requires a signature?
 - If a signature is legally required, does the law specify that the signature needs to be a wet, ink signature on paper?

Analyze Existing Wet Signatures

	Business Need Met By Signature	Risk Mitigation Obtained By Signature	Is Signature Legally Required? Does Signature Need To Be Wet?	Legal Basis / Legal Origin	Is Notarization Legally Required?	Legal Basis / Legal Origin
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						

Eliminate Any Unneeded Existing Wet Signatures

3. **Eliminate** any unneeded existing wet signatures (+ initials and notarizations) – without adding risk.

Where there is no business need and / or the wet signature is a hold-over artifact from when the form or program was first designed / last revised.

Where the risk is nonexistent or acceptably low – or where the signature had / has no connection to risk mitigation, i.e. “good intentions” (including a wet signature or a notarization requirement on a form thinking it is more “official” or “secure” - but there being no benefit / risk mitigation gotten from the wet signature or the notarization requirement).

Where there exist no legal requirements for the existing signature – and therefore by definition no legal requirements for the existing **wet** signature.

Determine Whether, Where, And How To Replace Remaining, Required Wet Signatures With Electronic Signature Solutions

4. **Determine** whether, where, and how to replace remaining, required wet signatures (+ initials) with electronic signature solutions.
 - **Categorize remaining, required wet signatures according to signature type.**
 - **Perform thorough business / legal / risk / regulatory analyses** of remaining, required wet signatures using electronic workflow / storage / security lenses.
 - **Determine best electronic signature solution(s)** (if any) for remaining, required wet signatures.

Determine Whether, Where, And How To Replace Remaining, Required Wet Signatures With Electronic Signature Solutions

	Signature Type	Business Analysis	Legal Analysis	Risk Analysis	Regulatory Analysis	Electronic Signature Solution(s)
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						
Signature						

Optimize Workflow For Any Remaining Wet Signatures

5. **Optimize** workflow in the case where an existing wet signature (+ initials and notarizations) can't be transformed into an electronic signature solution, for whatever reason(s).
 - **Combine the collecting of wet signature(s) (+ initials and notarizations)** with other in-person steps that must be retained (like fingerprinting) – so that all non-electronic parts of the workflow are handled at the same time – reducing the number of manual steps.
 - **Allow wet signature(s) (+ initials and notarizations)** to be collected through a mail-in step, rather than an in-person step.

Lessons Learned

- Review and analyze one signature at a time
- Include Program, Contracts, Legal and Information Technology in review process.
- Develop a set of off-the shelf technology solutions that can be used in combination as appropriate.
- Create a library of approved analysis / signatures

Useful Reference Materials

Useful reference materials:

Electronic Signature and Record Act (ESRA) Guidelines – Executive Summary:

<http://www.its.ny.gov/document/revised-electronic-signatures-and-records-act-esra-guidelines>

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