8 Best Practices for Digitally Signing Professional Engineering Documents

Organizations often have numerous seal and signature workflows. As engineers collaborate with various regulated professionals, adopting digital signature tools and signature software that are both compliant and optimal is crucial. Moreover, questions often arise when it comes to PDF merging, editing, and annotating.

Here are some best practices commonly adopted with the CertifiO professional digital signature and the ConsignO Desktop PDF reader that are effective and compliant, and which enhance digital signature processes.

1. Always accompany a signature and seal image with a professional digital signature

Understanding the basics is essential: a seal image is just an image and does not protect against tampering. It's the CertifiO professional digital signature that safeguards your signed electronic document, and the proofs of identity included in the digital signature certificate ensure its non-repudiation.

The advantage of a digital signature is that it detects changes made after signing, ensuring the integrity of the information. This document has been signed and cannot be edited, unlike simply placing an image of a seal on a document, which is akin to placing a Post-It note on your documents. It is easy to remove and copy and does not protect your identity, nor the information contained in the document in any way.

Essentially, authenticating electronic documents solely with the image of your seal and signature exposes you to risk. Contrary to popular belief, fraud does exist in North America; many discipline cases involve misuse of seals or misrepresentations of the right to practice.

Digital signature	Image of seal
Detect changes after signing	Easy to copy and remove Does not protect your documents from changes
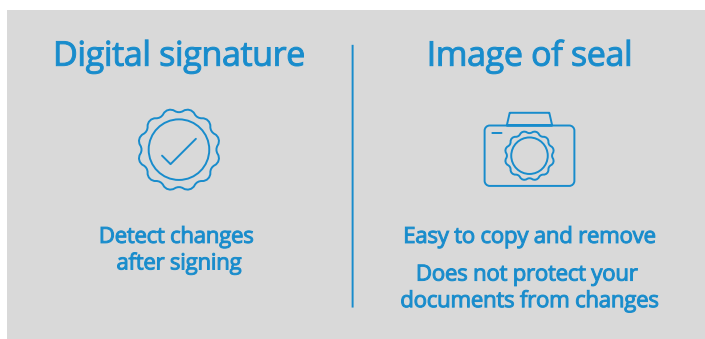
2. Apply your seal and signature image, the date, and a reason at the same time as your CertifiO professional digital signature

Our ConsignO Desktop software is designed to ensure that regulated professionals remain compliant with time stamping. A user can comply with their association's standards or guidelines by affixing the appearance of their seal, the date, and the reason for signing when digitally signing an original electronic document.

By applying the digital signature and the seal image at the same time, we facilitate proper authentication processes.

3. Apply several CertifiO professional digital signatures to a single document

You can apply as many digital signatures as you want to a document, allowing multiple accredited professionals to digitally sign the same document.

It is also possible to apply a digital signature without being able to see its appearance. Once affixed, CertifiO professional digital signatures can be verified for free with Adobe Acrobat®,

Bluebeam®, and our ConsignO Desktop PDF reader.

We even have a free website that verifies signed PDFs: VerifiO.com

4. Annotate a digitally signed document

You can annotate a digitally signed document. However, if you annotate a signed document, the digital signature will indicate that the document contains modifications, making the digital signature more secure than a simple wet signature.

Keep in mind that even if it is annotated, you can always revert to the original, unannotated, signed file.

## 5. Modify a digitally signed document - Create a copy

PDF is an increasingly flexible format for editing that can facilitate your workflows.

Consequently, you can modify the source content of a digitally signed document. However, the digital signature will disappear, and the document will no longer be signed, effectively becoming a copy.

It will have to be signed with a CertifiO professional digital signature to make it an original once again. When modifying a signed document, software tends to warn the user that the digital signature will be removed from the document.

6. Convert to PDF-A format in batches

Even if you can sign in the standard PDF format, it is recommended to convert to PDF-A format before signing as part of your digital

Digitally signed document → Modifications → Modified document is no longer signed
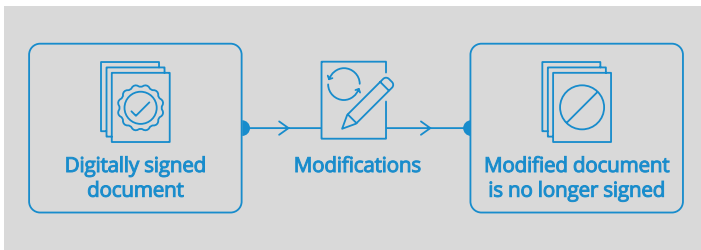
transformation strategy. This ISO format ensures the long-term archiving of documents.

To streamline your digital process, utilize the batch PDF-A conversion feature offered for free in ConsignO Desktop before starting the signing process. You'll be able to swiftly convert dozens of documents in seconds, enhancing your workflow and eliminating the need for repetitive manual conversion when it's time to sign.

7. Authenticate your AutoCAD files by attaching them to a PDF/A-3 document

CAD files can use digital signatures, but the CAD format is not standardized for long-term archiving and it is not an ISO-standardized format.

The best practice for creating digital archives would be to attach the CAD files in an ISO-standardized PDF/A-3 and digitally sign it. This ensures that we can identify the signer of the document years into the future.

We also recommend that you write on the cover page of the PDF/A-3 document:

• Project and contact information

• A list of attachments

• A paragraph certifying the authenticity of the attachments

• A seal and signature image in accordance with your practice guidelines

You can also use this practice to authenticate other file types such as .xls, .doc, .jpg, and so

on for archive storage. Bear in mind that over time these formats may no longer be readable, but at least there will be a record of your authentication.

8. Combine multiple PDF files with digital signatures

CAD format: not ISO standardized

Best practice to digitally sign a CAD format file
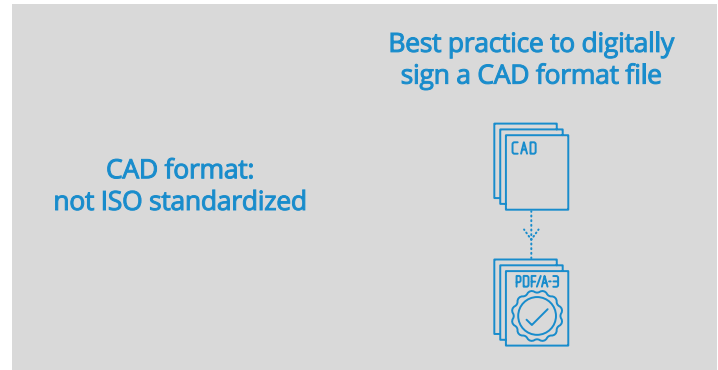
Many professionals like to merge signed documents to facilitate document circulation. However, when learning how to combine PDF files with digital signatures, there are certain practices you need to follow to ensure that signed documents are treated as originals when the documents are circulating.

Three solutions are available to create and authenticate a document containing several signed PDFs.

1. In ConsignO Desktop, you can use a PDF-A as a container to attach various electronic files including PDFs and other file formats like AutoCad®, Microsoft Word® and JPEG.

2. Signed PDFs can be merged to create a new document. Since it is a new document, all of the digital signatures contained in the signed documents will disappear. However, if a seal appearance has been applied, you will still be able to see the image of the seals and signatures. To make this document an original, just sign the new PDF with an invisible digital signature.

3. You can make a portfolio. This format preserves the originals and does not

remove digital signatures. However, since the portfolio is not an ISO format, we recommend the first or second option.

We do understand that this is not an easy concept at first glance. Get in touch with us if you need a demo or support.
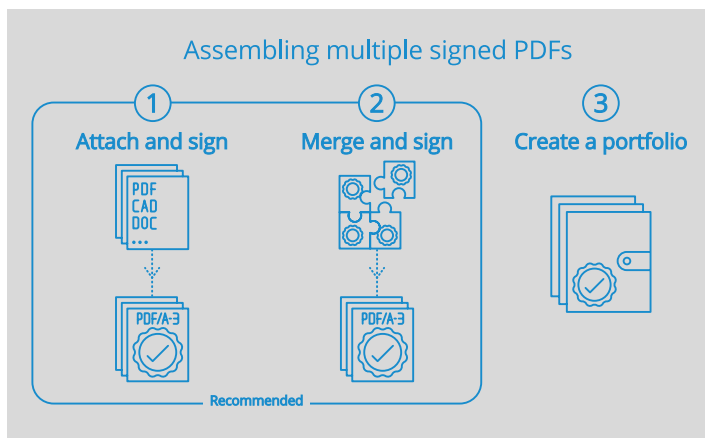
Professional Digital Signature: Make it a habit with free training sessions

These best practices make it easy to sign and authenticate drawings and professional documents.

Much like with paper and a wet seal, fostering digital literacy involves developing a routine of best digital authentication practices, which includes experimenting and learning from errors. Luckily, there's no paper wasted in the process!

To fully leverage CertifiO professional digital signatures and ConsignO signing tools, we invite you to sign up for our complimentary training workshops. These sessions are designed to enhance your practice and your team's efficiency. Additionally, we offer a wealth of free educational resources, such as video trainings and a user guide, to further support your learning.

Assembling multiple signed PDFs

1. **Attach and sign**
   PDF CAD DOC ...
   → PDF/A-3 ✓

2. **Merge and sign**
   → PDF/A-3 ✓

3. **Create a portfolio**

Recommended

Digitally transform your organization now!