

Electronic document transmission at ROTZLER (as of Dec. 2010)

Since 1 November 2010, ROTZLER has been using not only the traditional communications channels such as letter and fax, but also the option of sending documents electronically as an email. For this, only hyperlinks are sent in the email, i.e. links to the actual files for download.

Usually, e.g., an ordering email contains two hyperlinks: One to the actual order document, and another to an accompanying document that summarizes all also applicable documents.

Questions that hardly ever come up for traditional transfer media or that have been cleared up a long time ago must be re-answered for this.

- What **format** is easiest to handle for the recipient?
- Can the recipient be sure that the order can still be displayed **identically** even after many years?
- Are all relevant accompanying documents included **completely**?
- Can the receiver be certain that the order's **originator** actually is the ROTZLER company?
- Can the receiver rely on no **manipulations** occurring during transfer?
- Are the indicated **date values** permissible?
- Is the receiver able to simply **verify** all of these?

Rotzler dealt with these questions and implemented a solution according to the state of the art.

Format: PDF or PDF/A 1b

Due to the wide distribution of the open PDF standard (**portable document format**), all documents are sent in this format.

"**A 1b**" means that the documents only use certain options of the PDF standard. This guarantees for **visual reproducibility**.

This means that a PDF/A document looks the same at all times - no matter the PDF viewer software used for displaying it.

Origin Warranty and Unchangeability

When exchanging traditional paper-bound documents, a hand-written signature on the last is page still deemed a binding confirmation of origin. The same applies for facsimile transfers.

This function is assumed by the digital signature for electronic data exchange. A digital signature generally has the great advantage that not even the smallest changes to the signed data can be performed unnoticed without making the digital signature invalid.

General statutory recognition and legal force, however, are only given to the so-called "**Qualified Electronic Signature**" (QES) as defined in the German signature act (Signaturgesetz; SigG). Therefore, ROTZLER signs all documents before submission with a qualified electronic signature in a clearly **defined signature process** and therefore uses the technology required for this.

Time Stamp

A paper signature is usually accompanied by the date.

In case of digital signatures, it is sensible to attach a time stamp server's time stamp at the time of signature. Thus, the receiver has a high reliability for the indicated time of signature.

ROTZLER currently uses the time stamp server of the **Deutsches Forschung Netzwerk** (www.pki.dfn.de/zeitstempel)

Verifiability

Digital Signature

Initially, it is, of course, not possible to see on first glance if a PDF file is digitally signed or present in PDF/A format. This is generally impossible in particular when printing it on paper.

Indication of the digital signature

ROTZLER prints the corresponding note onto every document - integrated into our signature process. As already indicated, this is only a note and not the digital signature.

Order: The first page has a header with the signature date.

For an order document:

Digitally signed at 2010-1119-080323 by ROTZLER GMBH + CO. KG (qualified digital certificate according to the German SigG).

Accompanying document: The accompanying PDF typically consists of CAD drawings, QSBs and the QSB catalogue. There, every individual page indicates the order it corresponds to and the time of digital signature in the upper left corner.

For a QSB:

Used for: "ORDER=10110978". Digitally signed at 2010-1119-080401 by ROTZLER GMBH + CO. KG.

For a drawing:

Used for: "ORDER=10110978". Digitally signed at 2010-1119-080401 by ROTZLER GMBH + CO. KG.
KL=2m

Electronic verification of the digital signature

The corresponding verification software is required for this. An important quality difference is whether or not the software is working with self-defined trust settings or real-time OCSP-requests (**O**nline **C**ertificate **S**tatus **P**rotocol).

For the first, the user generally decides on his own whether the digital signature of a certain issuer (e.g. ROTZLER GMBH + CO. KG) is trustworthy and stores this information in his software.

If he receives a document signed that way again, the software shows that the signature is valid according to the previously made trust classification.

Older versions of Adobe Acrobat Reader work this way. However, Adobe also offers expansions that can perform OCSP requests.

For more information, please use the Adobe website <http://www.adobe.com>

For other PDF viewing software, please refer to the respective information from its manufacturer.

Signature verification software that can perform OCSP requests is much easier to handle by the user, since virtually no configuration is required for trust classification and the complete approval path of digital signatures can easily be verified as well. As an example, we would like to refer to the easy-to-operate and free-of-charge product digiSeal® reader by Secrypt <http://www.secrypt.com>

Independently of the verification software, the following information is always found when verifying the digital signature of our documents:

Certificate holder:

Country: DE
Name: ROTZLER GMBH + CO. KG :PN
Serial number:
decimal: 550155787
hex: 20 CA B6 0B
Pseudonym: ROTZLER GMBH + CO. KG :PN
Key ID: EE 61 D6 BA B2 C2 CA 06 96 68 14 F3 CF 3C 1C 5D C0 94 45 DC

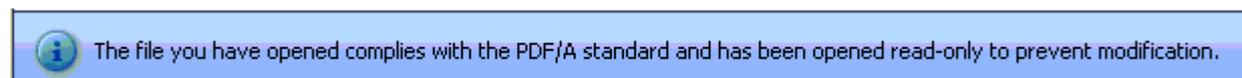
Certificate issuer:

Country: DE
Organization: Deutsche Telekom AG
Name: TeleSec PKS SigG CA 17:PN
Serial number:
decimal: 472
hex: 01 D8
Key ID: 57 A0 01 BB 58 49 85 29 AE E9 DF AD 68 10 FA 05 6F 5F 3A 9B

PDF/A Compliance

Current versions of PDF viewer software show directly whether or not a PDF file is in PDF/A format.

Acrobat Reader 9.4, for example, displays a header.



To assess PDF/A compliance, additional products are required.

Acrobat Professional 9.0, for example, has an integrated "Preflight" product that determines detailed information on PDF/A compliance or deviations.