

Two signatures, one file

This file was signed twice. The first signature was made while the document was being written. The second was added afterwards, to the finished file, without a single byte of the first revision being rewritten - which is the only way it can be done, because a signature covers the bytes of the file it sits in.

How the second one got in

As an incremental update (ISO 32000-2, 7.5.6). Everything new - the signature dictionary, the field, its widget, a second copy of the catalog and a second copy of this page - is appended behind the %%EOF of the first revision, together with a cross-reference section and a trailer of its own. The old copies stay in the file, underneath the bytes the first signature covers, and the appended cross-reference section decides which of the two a reader sees.

The new signature covers the whole file, the first signature included, up to the end of the %%EOF that closes its own update. The first one covers its own revision and nothing else.

What a reader will tell you about it

pdfsig reports both signatures and says "Signature is Valid" for each. For the older one it also says "Not total document signed", and that line is the correct answer rather than a complaint: the file has grown since that signature was made, and it says so. The newer one gets "Total document signed".

Both certificates come from a test CA that was made a moment before this document and deleted a moment after, so every reader will report the issuer as untrusted. That too is the correct answer. A valid signature and a trusted signature are two different statements, and only the first one is a question about the PDF.

Check it yourself

```
pdfsig 08.03-second-signature.pdf
qpdf --check 08.03-second-signature.pdf
pdfsig -dump 08.03-second-signature.pdf
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