

Verifying-my-artwork

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Works signed by Bill Toole carry C2PA Content Credentials: a digital signature embedded in the image file. It shows who signed the file and whether it has been changed since.

My root certificate

- Download: [root.pem](#)
- SHA-256 fingerprint:

```
[06:A0:2E:C0:C6:CD:AF:75:4A:91:64:E1:3B:3F:1E:FD:77:AD:5D:BA:15:47:E5:8B:71:17:DE:21:0F:C2:41:8A]
```

Please compare the fingerprint of the file you download with the one above. This fingerprint is also posted [here](#), so you can check that the two match.

How to check an image

You need `c2patool` and `openssl`. On a Mac: `brew install c2patool`.

1. Check the root certificate you downloaded:

```
openssl x509 -in root.pem -noout -fingerprint -sha256
```

It must match the fingerprint above.

2. Extract the signing certificate from the image:

```
c2patool artwork.jpg --certs > image_cert.pem
```

3. Confirm it was issued under my root:

```
openssl verify -CAfile root.pem image_cert.pem
```

`image_cert.pem: OK` means the certificate chains to my root. If a signature was made more than a year ago, my signing certificate may since have expired. In that case add `-no_check_time`.

4. Confirm the image has not been altered since signing:

```
c2patool artwork.jpg
```

Look for `claimSignature.validated` in the output.

What you will see

C2PA viewers such as Adobe's Content Credentials tool will show my name but label the issuer "Unrecognized". This is expected. My root is my own and is not on the official C2PA trust list. The steps above are how to confirm it is mine.

Limits

- Re-saving, resizing, or re-compressing an image changes the file and removes or invalidates the signature. Platforms that strip metadata (many social networks) remove it too. The signed original is the reference copy.
- My signing certificate is renewed yearly under the same root. Older signatures stay valid.