Dennis Walker
President and Founder
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Since 1996

Photo Mechanic
Since 1998

Preserving Provenance During Metadata Editing

Challenges and our solution

I. The Goal: Keep the flame alive!
II. Components of a JPEG "torch"
III. Protecting the "torch": The Provenance Locker
IV. Passing the "torch": Add another flame
V. Summary

I. The Goal: Keep the flame alive!

- Think of a digital signature as an Olympic flame
- The camera ignites the flame
- The photo is the torch

Many times Photo Mechanic is used by the first torch runner (photo editor), and the torch is often passed to other runners using Photo Mechanic.

<u>We have a huge responsibility to keep that flame alive.</u>

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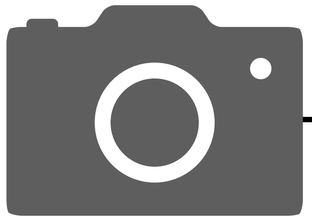
II. Components of a JPEG "torch"

Two Parts to a JPEG
- Metadata
- Image Data



Camera makes photo and digitally signs (aka the flame)

Digitally Signed JPEG (C2PA)

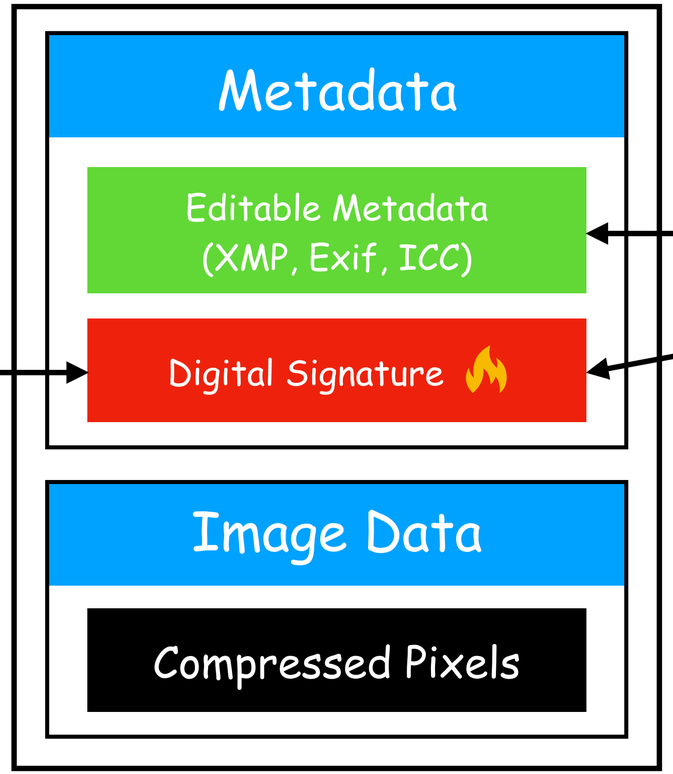


Photo Mechanic edits the metadata only, but this will break the digital signature

The challenge is to edit metadata without breaking the digital signature!

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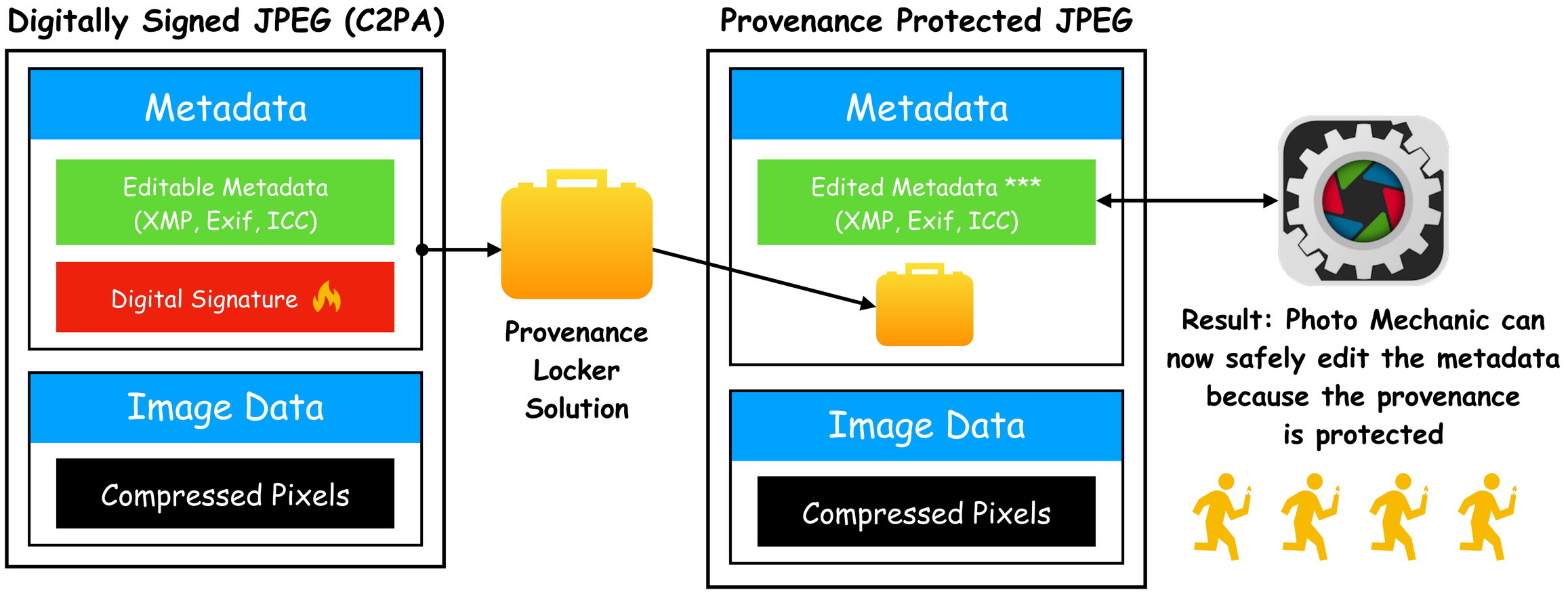
III. Protecting the "torch": The Provenance Locker



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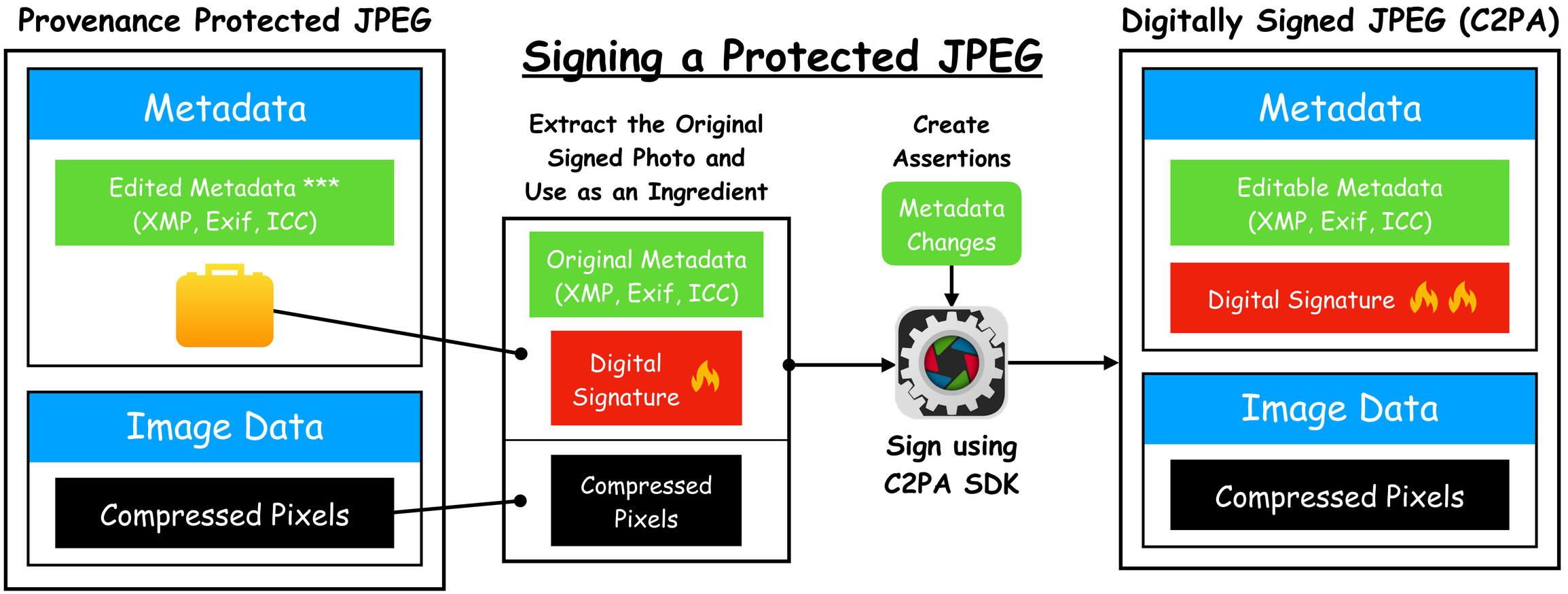
IV. Passing the "torch": Add another flame



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V. Summary

- Photo Mechanic protects the provenance of signed photos by using a Provenance Locker.
- Metadata of protected photos can be edited repeatedly.
- After metadata editing, photos can be signed and passed on to other C2PA-compliant software.
- This provides for an efficient and authentic metadata editing workflow for C2PA photos.

∴ There is a clear path for news agencies to publish authentic photos from capture.

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