



Identity hooks

A proposal for [consistent](#), [private](#), and [extensible](#) identity in C2PA

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We are building the
future of digital rights
protection.



AI that knows what's original.
Detect remixes, stop fakes, reward creators.

Identity statements have two distinct purposes



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Deanonymization

Consistency



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"My legal name is X."

"I control this set of social accounts."

"I'm affiliated with this organization."



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Deanonymization

"My legal name is X."

"I control this set of social accounts."

"I'm affiliated with this organization."

Consistency

"I took this photo and then edited it."

"I added a new social media account."

"I'm providing permission to use my work to another creator."

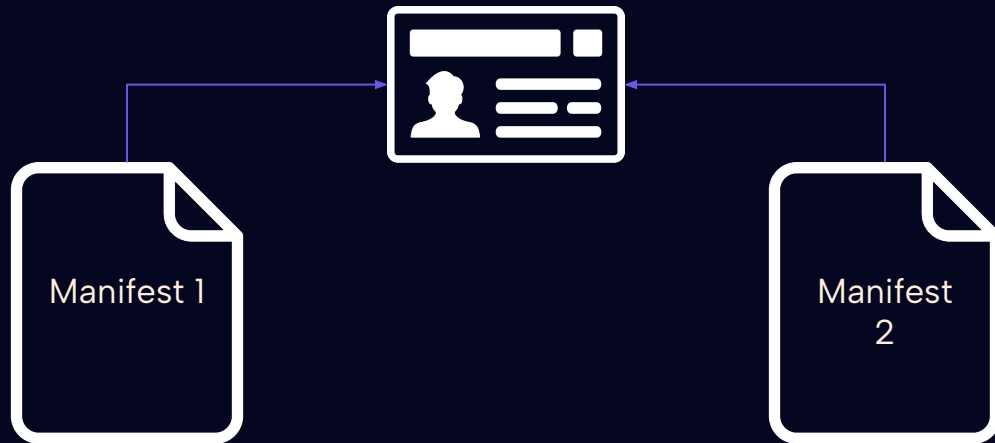


We're missing tools for *Consistency*



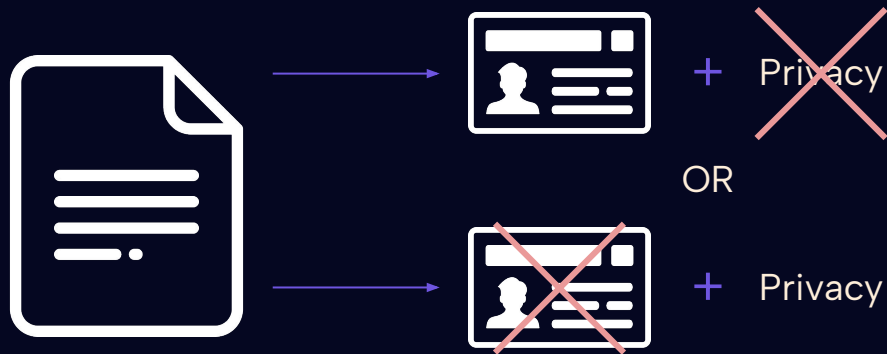
We're missing tools for *Consistency*

- All statements about consistent action are *indirect*



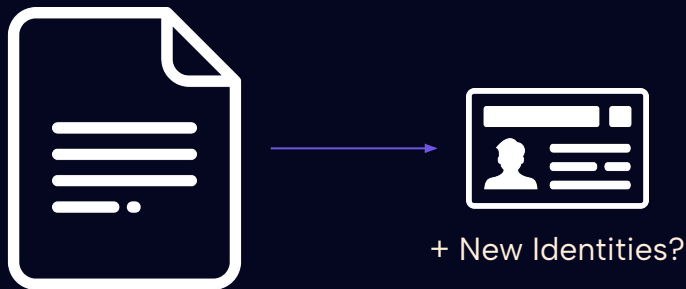
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- *Adding an identity assertion sacrifices privacy*



We're missing tools for *Consistency*

- All statements about consistent action are *indirect*
- *Adding an identity assertion sacrifices privacy*
- *Credentials cannot evolve over time*



Identity hooks are a suite of tools to decouple statements of **involvement** from an actor from the **deanonymization** of that actor.



What is an identity hook?



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1.

2.

3.



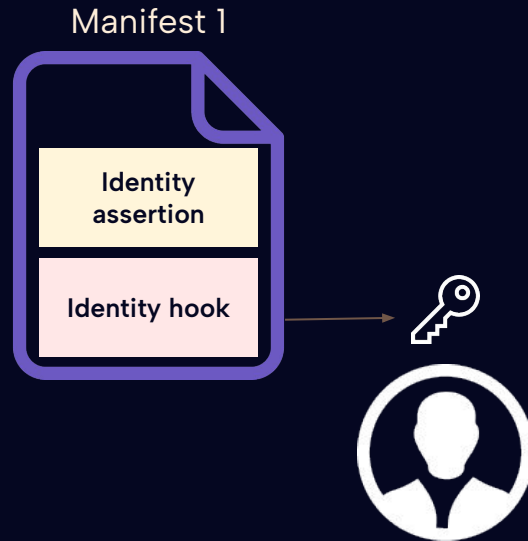
What is an identity hook?

1. A separate assertion that binds an opaque **one-off key pair** to a C2PA credential.
- 2.
- 3.



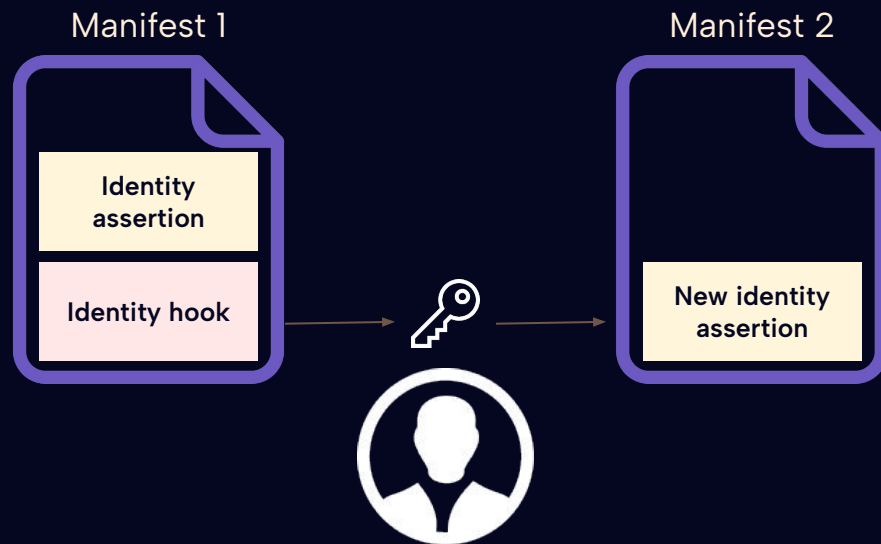
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2. A protocol to place that key pair in the **custody of the creator**.
- 3.



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1. A separate assertion that binds an opaque **one-off key pair** to a C2PA credential.
2. A protocol to place that key pair in the **custody of the creator**.
3. A mechanism to associate **future assertions** with the original identity.



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- Creators **no longer have to decide** which identities to assert up front.
- Creators can **secretly prove their involvement** in a piece of content without publishing their identity to a credential.



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The ecosystem – same roles, new responsibilities

- **Claims generators** can now create identity hooks unilaterally
- **Identity aggregators** can now custody identity hooks on named actors' behalfs
- **Verifiers** now associate identity hooks across a manifest repository
- **Named actors** get new capabilities, but don't need to know the technical details!



Security considerations



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- Binding actions from multiple manifests together without sacrificing privacy



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- Changing the custody of identity hook keys without risking identity theft
- Binding actions from multiple manifests together without sacrificing privacy
- Redaction resistance for evolving identities
- Limiting the exposure from compromised keys



Full technical
proposal [here](https://github.com/decentralized-identity/cawg-identity-assertion/issues/216).

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Next steps

Create a sub-committee to finalize an implementation of identity hooks, ensuring best practices for privacy, security, data efficiency, and backward compatibility.



The logo features the word "YAKOA" in a bold, white, sans-serif font. A small blue triangle is positioned at the base of the letter "A".

YAKOA

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www.yakoa.io