Trust & Identity Incubator

Decentralised identity for Research - DI4R

Niels van Dijk, Branko Marović

AARC BPA SSI Expert Group

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Decentralised identity

Issuer
Issues

Holder
Acquires, Stores, Presents

Verifier
Requests, Verifies

Verifiable Data Registry
Maintain Identifiers and Schemas

Attribute flow

Federation

First use
issuer
user
attribute
proof-request
order
Second use
issuer
user
attribute
proof-request
order
And so on
issuer
user
attribute
proof-request
order

Distributed Identity

Preparation
issuer
user
attribute
request
proof-request
First use
issuer
user
attribute
proof-request
attribute
And so on
issuer
user
proof-request
attribute

Source: https://privacybydesign.foundation/irma-explanation/#architecture
Use cases & Demo

Issuer

- Local Issuer (simpleSAMLphp authsource)
- PrPy Issuer (simpleSAMLphp proxy)
- ORCID Issuer
- SRAM Issuer
- HEXAA Issuer
Use cases – Researcher identification and authorization

- In research collaborations, researcher identity is an aggregate of multiple sources (institutions, VOs, others)
- Need for a flexible ‘Guest / External identity’
- AARC BPA proxy model has usability challenges
- Long-tail of those who are still struggling to use FIM

- Only run centralised infrastructure to hold VO credentials, but not AuthN proxy
- Leverage ‘external’ credential sources, e.g., for guest login, MFA or addition identity validation
- Removing the need to switch between multiple accounts
- Agility in establishing trust relations
Where might SSI make a difference?

- Reduce the cost of trust establishment
- Scales better and allows for a longer tail
- Engaging with other sectors, both in the ability to (re)use, but also to deliver relevant data
- Better and easier end-user interaction and control over personal data
- Removing the need to switch between multiple accounts
- Agility in establishing dynamic or ‘ad-hoc’ relations between entities
EU Digital Identity Wallet (EDIW) and framework

- Usage is getting more mobile in terms of technology and cross-border access.
- Huge discrepancies in availability and adoption of national digital IDs and cross-border authentication (eIDAS ‘1.0’).
- Integrative EU-wide legal and technical framework for (national) wallet implementation.
- For service providers: bring together the customer base, save costs and time, streamline interactions, build cross-border trust.
- Scenarios: rent a flat or car; open a bank account; driving licence; diplomas…
- Working on detailed requirements and implementation toolkit; wallet is a qualified electronic signature/seal creation application.
  - Any entity that collects, creates and issues attested attributes should be able to become a provider of attributes
  - RPs should use the electronic attestations as equivalent to paper
  - Private RPs should accept the use of EDIW for strong user authentication
  - Very large online platforms to be mandated to accept EDIW authentication
- eIDAS 2.0 will define Personal Identification Data (PID) and related EDIW features.
Researchers need a trusted digital identity to collaborate
Ability for collaborations to issue community-created entitlements towards the researcher
Research collaborations can act as verifiers for researchers
Wallet approach makes combining credentials more easy

The current FIM model requires a home organisation and federation – not every researcher can join a federation for various reasons.
Leverage external identity, with proper assurance, for collaboration with users and partners from other sectors

Just like FIM, SSI relieves services from establishing their mechanisms for identification of individuals
May reduce the need for proxies
Can be built on top of eduID like initiatives

Ability to directly establish trust relations between entities participating in collaboration
Thank you

Any questions?

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