What is a Smart Wallet and How Might It be Implemented?

data minimization and guiding the end user









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Requirements of "smart" wallet?

Required components

Standards and Gaps



What is a "Smart" wallet?

A Smart Wallet allows users to collect, manage and share verified Digital Credentials, such as a passport, driving license, banking details, driving license, health information, entry passes, tickets, access tokens to your systems.

Specialist Proofs can be derived by the Smart Wallet, or its agent, for example to show the user is over 18, has achieved a Level of Assurance, or is COVID safe



Users are in control. They store credentials into their Smart Wallet and then share them with acceptors of credentials.

A **trust framework defines the rules** for credentials and proofing and ensures the Digital ID is safe and secure



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What is a Smart Wallet? Derived Credential or Proofs

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So why do we need this complexity?

Example of Covid Safe

- One (or more) credential
- Many sets of rules depending on destination
 - National rules to enter country
 - Event rules
 - Conferences
 - Restaurants
 - Sports events

- We all had to to varying degrees check the rules and make appropriate decisions about travel etc
- What will happen when there are many more credentials with many more sets of requirements to meet?



Use Case

Neha, is the policy manager at a DPoP fan site, she needs to be sure that:

- If the website user is resident in Europe and age >=13
- There is **no need** for **date-of-birth or age** to be shared
- Neha also wants no information about the end-user if they are under 13 and in Europe
- Info is from a **trusted issuer**
- That the end-user is **authenticated** to a defined level

There are terms and conditions available



Use Case part 2

- Mary wants to access the DPoP site because she is a big fan of the authors
- Mary has 15 credentials in her wallet
- She does not want to over-share her data
- It is not that obvious which credentials may meet the DPoP fan site policies
 - the T&Cs are long and boring

Do we want Mary to do all the thinking or can the wallet work out which credential is most likely to work?



Challenges?

It is a multi party system so standards will be critical

- Complex RP requirements
- Interoperability
- Data schema and semantics

- Privacy user perspective
- Data Minimization RP perspective

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Meaningful consent







Technical Components needed

Data definitions

- Context Expression
- Rules Expression
- Credential Formats

Functional Capabilities

- Data Minimization
- Conditional Return
- (Rule) Combining Logic





Relevant standards landscape



What next?

- Come join in to discuss the gaps in more detail
- Come join in to start filling the gaps
- There are wider concerns than interoperability (like UX)
 - A prototype focusing more on UX would be a great next step







Real world wallet journeys are complex

Various components are needed to deliver those journeys

There are some standards but there are gaps





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THANK YOU!







