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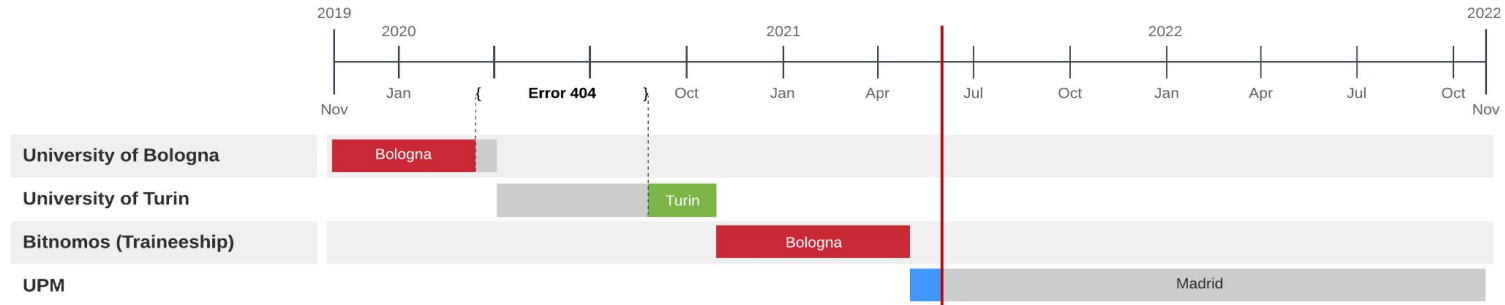
(Location) Privacy by Design through Disintermediation:
from Data Silos to Decentralized Technologies

Mirko Zichichi

Supervisors, Secondments, Labs

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- Ontology Engineering Group
- Analysis Of Networks And Simulation (AnaNSi) Research Group
- Legal Blockchain Lab
- BitNomos (traineeship)

✚ 1. Systems that store and transfer personal data in a **transparent and non-centralized** manner

**Consumers privacy paradox for data disclosure**
- *attitude*: profess their need for privacy (general)
- *behavior*: remain user of the tech that track and share their data (contextual)

"Privacy Calculus":
perceived value of disclosure utility= *privacy risk / benefits*

Correct estimation? -> undermined by asymmetric information or unawareness of possible alternative solutions.

Norberg, P. A., Horne, D. R., and Horne, D. A. (2007).The privacy paradox: Personal information disclosure intentions versus behaviors.
Laufer, R. S. and Wolfe, M. (1977).Privacy as a concept and a social issue: A multidimensional developmental theory.
Acquisti, A., Taylor, C., and Wagman, L. (2016).The economics of privacy

1. Support the right of persons to the protection of personal data while at the same favoring **portability, social good and economic exploitation**
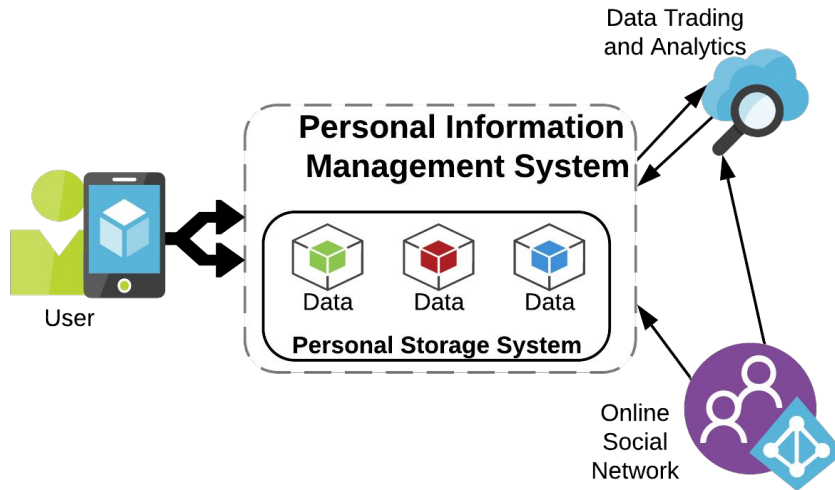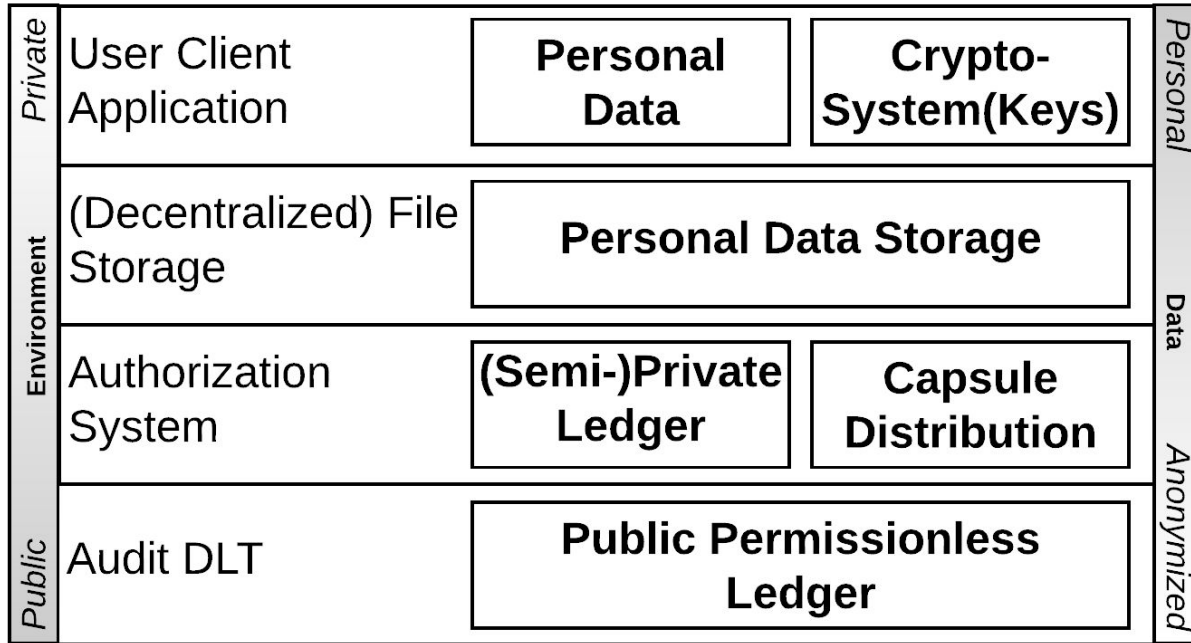
European Commission. A european strategy for data (2020)
Isabelle, L., Pelics, G., Binctin, N., and Pez-Pérard, V. (2018).
My data are mine: Why we should have ownership rights on our personal data.
Bock, S. (2018).My data is mine-users' handling of personal data in everyday life.SICHERHEIT 2018.

Data Governance Through a Multi-DLT Architecture in view of the GDPR

+ 3. Represent and reason with policies in a **distributed execution to govern the access** to personal data

The use of smart contracts may be crucial to regulate user's data flow **automatically**, since these can:

- enable the user to set data access rules in order to disclose data
- determine if a policy satisfies the legal requirements
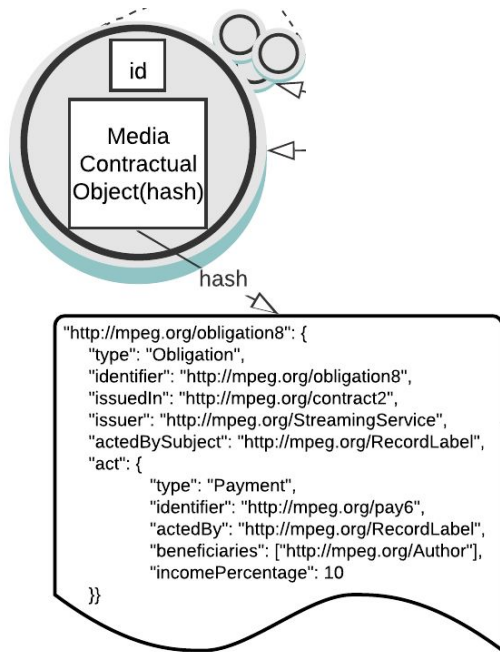- determine if a data request can be satisfied according to the individual's preferences

Cervone, Luca, Monica Palmirani, and Fabio Vitali. "The Intelligible Contract." HICSS. 2020.
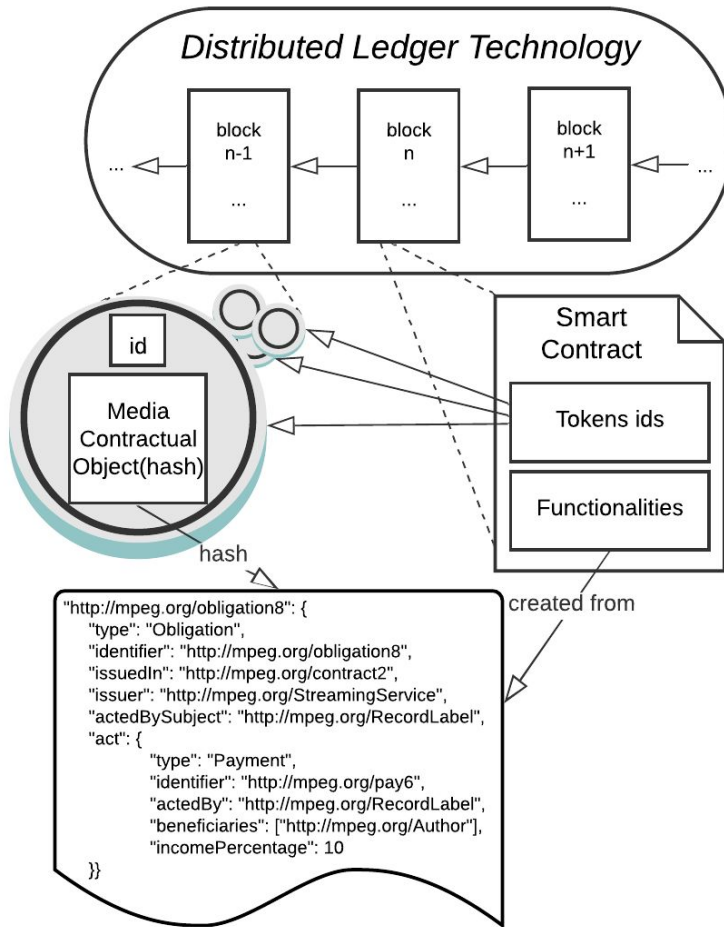
ISO/IEC 21000-23 Smart Contracts for Media

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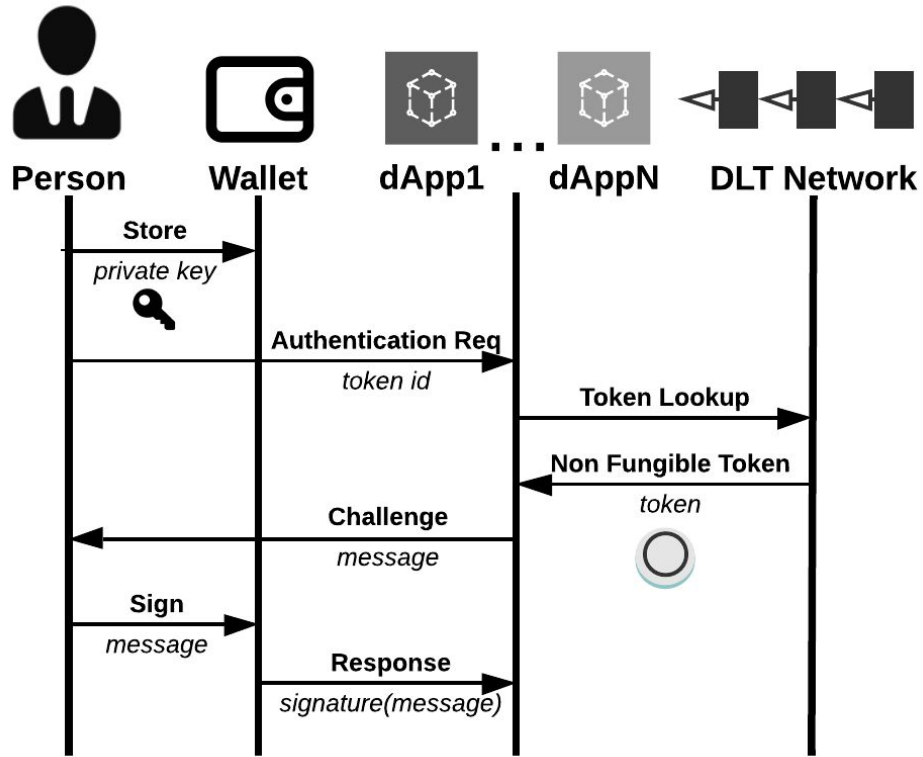
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Policies representation through smart contracts

ISO/IEC 21000-23 Smart Contracts for Media

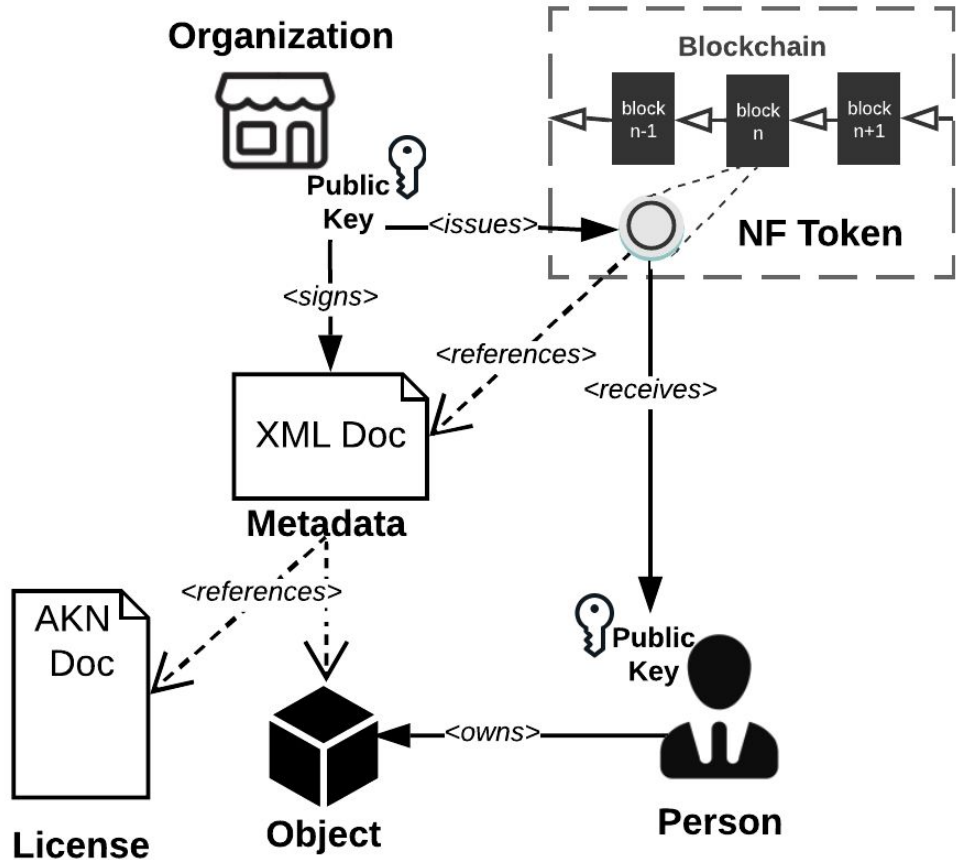Policies representation through smart contracts

ISO/IEC 21000-23 Smart Contracts for Media

Policies representation through smart contracts

Intelligible Identities and Certificates: Intelligible models for verifying the authenticity of digital certificates and online identity assertions, based on the use of DLTs, smart contracts and standards for mark-up and identification of legal documents

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Policies representation through smart contracts

Intelligible Identities and Certificates:
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