

Semantic Entity Relationship Management

Semantic Relationship Orchestration of decentralized digital Identities using distributed Identity Management Systems.

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 @idmpath / @wedacon

Who we are and what we need

- ❑ WedaCon was founded 2001 and is a ,pure` identity management company ...
- ❑ ...but we have no experience regarding projects funded by EU, so we need...



Research Partner

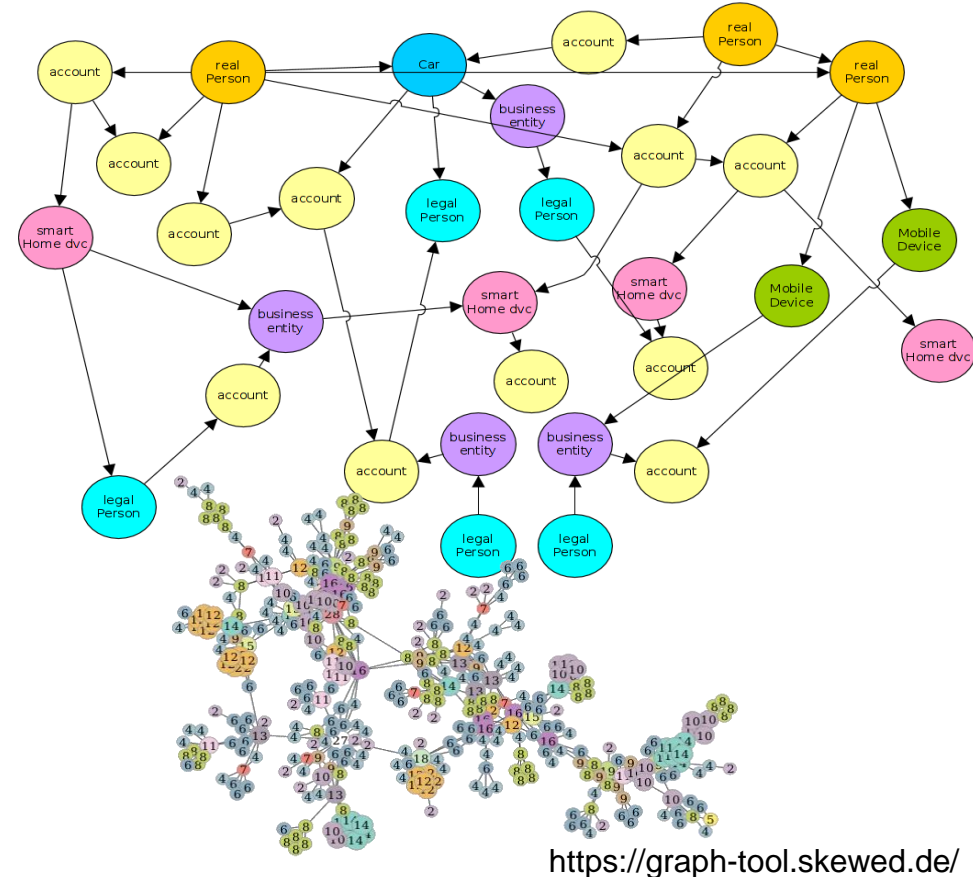
- Partners with experience in semantic technologies / ontology development / data scientists
- Universities etc on new approaches on IDM

Implementation Partner

- Industrial/ Government/ universities for Proof-of-Concept / reference architecture implementations and/or ,Early implementers`.

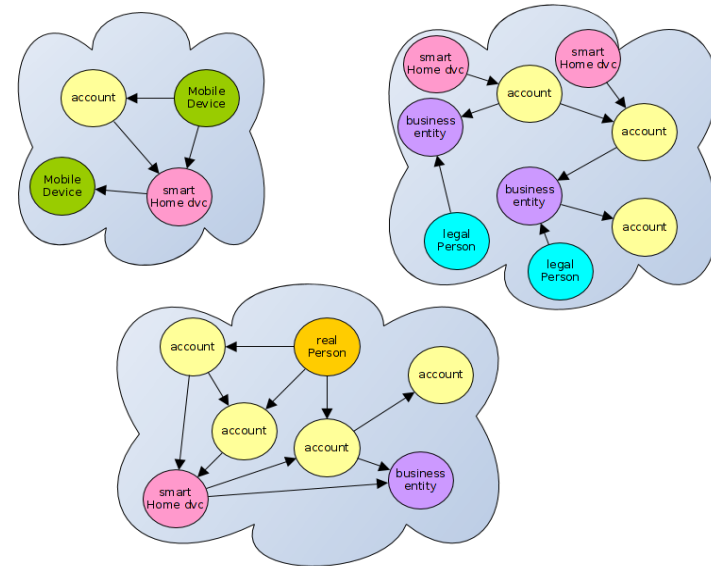
Identities in the wild

- ❑ Identities vs. ‚Entities‘
- ❑ Entities = ‚Things‘
- ❑ ‚Internet of Everything‘
- ❑ Billions of entities, with trillions of relations.
- ❑ Held in silos.



Problem Statements

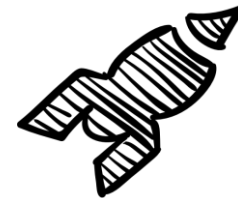
- ❑ Digital identities related to ,real world entities`
- ❑ Digital representation | twin | clone (R-T-C)
- ❑ Connected entity acting on behalf of ,me`
- ❑ Identity silos and authority
- ❑ No sovereignty about my digital R-T-C
- ❑ Identity silos, managed by powerful companies
- ❑ Hidden AI in those identity silos



Disconnected relations between entities we do not even own, although its ,about us`.

Proposal / Draft Solutions

- ❑ Self-Sovereign Identity (SSI) Concepts
 - ❑ Couple of solutions based on Blockchain / DLT technology.
- ❑ Distributed Identifier Concepts (DDI)
 - ❑ DNS style, incl DLT components.
- ❑ Distributed Identity Management (DIDM) Concepts
 - ❑ Different to a simple distribution of components of (one) IDM System.
 - ❑ Requires **interconnectivity** and **understanding** of the silo concepts and **claims**; or in other words:



Common notation with **semantic** capability to describe cross-silo relations

DIDM Draft

- ❑ Relations are described by ,subject-predicate-object`
- ❑ DID are ambiguous identifiers (URI) for subjects
- ❑ Objects can be ambiguous or non-ambiguous
- ❑ Relations are ambiguous within the silo, but **non-ambiguous** external.

Solution Proposal: use ambiguous relations and objects

- ❑ Using Linked Data concepts
 - ❑ Expose data from silos using **standardized** functions and **semantic** layer to interlink silos, describe real world / interconnections of entities
 - ❑ Link above data duplication (data minimization)
 - ❑ Manage Authorization and obligation
- ❑ Management / Control driven by Ontologies

Summary

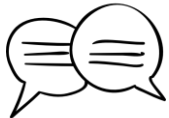
We propose the development of an ontology driven Distributed Identity Management System, which can add the missing link between self-sovereign and/ or distributed identities.



Research / Development of common ontology for Identity and Access Management



Develop Proof-of-Concept / Reference Implementation for semantically driven IDM



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Whitepaper

<http://bit.ly/2tb6iov>