



TRUST
Over **IP**
FOUNDATION

Inputs & Semantics WG Weekly Meeting

15 December 2020

 THE **LINUX** FOUNDATION

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Agenda

- › 1. Welcome (Paul—2.5 mins)
- › 2. Newcomer Introductions (Paul—2.5 mins)
- › 3. Revamped wiki page: *Inputs and Semantics WG* (Paul—10 mins)
- › 4. Early demo: *Digital Immunization Passport* (Robert/Christoph—30 mins)
- › 5. Logistics and miscellaneous (Paul—5 mins)
 - › a. News from the Operations Team
 - › b. Leadership positions
 - › c. Meeting schedule

Newcomer Introductions

(30 seconds!)

1. Name
2. Location / time zone
3. Affiliation(s)
4. One-sentence summary of your interest in Semantics (or **one particular semantics-related** issue you personally want to see solved)

Task Force/Focus Group Updates

(5 mins)

- Medical Information TF (Scott)
- ✓ OCA-FHIR FG (John/Mukund)
- Notice & Consent TF (Mark)
- Privacy & Risk TF (Jan)

Revamped wiki page:
Inputs & Semantics WG
(10 mins)

Update by: P.Knowles

<https://wiki.trustoverip.org/display/HOME/Inputs+and+Semantics+Working+Group>

Semantics Working Group - Revised Charter

- › Proposal - modify the existing Charter for the Decentralized Semantics (now Semantic Domain) WG
- › Charter for new “Inputs and Semantics WG” will distinguish between:
 - › **Inputs** - focus on defining specifications and best practices for key management (including a focus on KERI)
 - › **Semantics** - focus on defining data capture schemas and overlays

RESOLVED: that the *Inputs and Semantics Working Group* Charter is hereby approved.

Approved on *December 9th* by the ToIP Steering Committee

Revamped wiki page for *Inputs & Semantics WG*

The mission of the ISWG is to define a decentralized key management infrastructure (*Inputs domain*) and data capture architecture (*Semantic domain*) for Internet-scale deployment.

The scope of the ISWG is to define specifications and best practices that bring cohesion to data entry (aka *Inputs*) and data capture (aka *Semantic*) processes and standards throughout the ToIP stack whether these standards are hosted at the Linux Foundation or external to it.

<https://wiki.trustoverip.org/display/HOME/Inputs+and+Semantics+Working+Group>

Dashboard / Trust over IP Foundation

Inputs and Semantics Working Group

Created by Drummond Reed, last modified by Paul Knowles about 5 hours ago

- Introduction
- Scope
- Meetings
- Deliverables
- Chairs / Leads
- How to join
- Participation
- Inputs Group
 - Scope of the Inputs Group
 - Chairs / Leads of the Inputs Group
 - Core Inputs Concepts
 - Deliverables of the Inputs Group
- Semantics Group
 - Scope of the Semantics Group
 - Chairs / Leads of the Semantics Group
 - Core Semantic Concepts
 - Deliverables of the Semantics Group

Introduction

The Inputs and Semantics Working Group (ISWG) supports a practical approach to further enable the adoption of the Trust over IP digital trust. All data inputs operated on by any process or system should be authenticable with

Inputs	Authenticable		
	Credential		
	Profile		
	Claim		
	Entry		Active
Semantic	Non-governing	Capture	Passive
		Attribute	
		Schema	
		Form	
	Immutable		

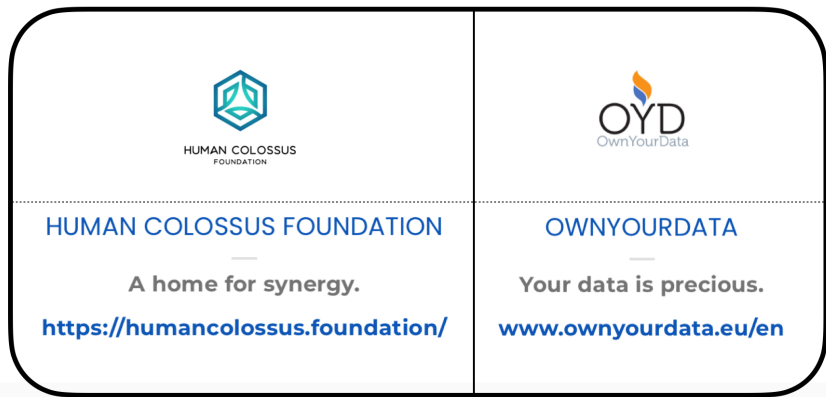
Figure 1 - Identifier States. A component diagram showing the inputs and semantic counterparts of a balanced network model

Early demo:
Digital Immunization Passport
(30 mins)

Presented by: R.Mitwicki/C.Fabianek

<https://dapsi.ngi.eu/hall-of-fame/dip/>

Digital Immunization Passport (DIP)



Currently, vaccination and immunization information are spread over different organizations like labs and hospitals as well as pharmaceutical companies together with government agencies. A patient usually only has a paper certificate that provides vaccination treatments with often difficult to read handwritten additional information. In our proposed solution we will develop an end-to-end data flow that:

- connects to various immunization information providers,
 - aggregates, harmonizes, and semantically annotates the data,
 - makes this data-set available in an open format accessible for Personal Data Stores (PDS), compliant to the MyData Operator guidelines,
 - provide a human-centric data management platform for health information,
- allows to prove immunization status through Verifiable Credentials, and
- packages selected health data for processing by 3rd parties together with a well-defined usage policy and a provenance trail.

The main focus of this project is on Data Interoperability & Compatibility through establishing interfaces between health industry and individuals as well as pushing forward on standardized interfaces for PDSs. Additionally, we address Data Transparency (Usage Policies and Data Provenance in Semantic Containers) and Security & Privacy (by applying blockchain technology and digital watermarking on data sharing).

More information: <https://www.ownyourdata.eu/en/dip/>

DIP: Core components



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- Trusted Digital Assistant (TDA)

Based on the *Hyperledger Aries toolbox*, a **Trusted Digital Assistant (TDA)** is a user friendly interface for Dynamic Data Economy (DDE). It allows the user to manage his/her identity, data with consent, allows for decentralized interaction with other entities and services.

- TDA, a set of applications running across the platform to help users to manage digital assets.
- TDA, enables users to exchange *verifiable information*, including proof claims.

DIP: Core components



- Data Store

Data Stores are based on the following principles:

- *Open & Free*
- *Secure*
- *No lock-in*
- *Extensible*
- *Standard compliant*

In the DIP project, the Data Store provides the human-centric personal data management that interfaces to Semantic Containers and the Trusted Digital Assistant.

DIP: Core components



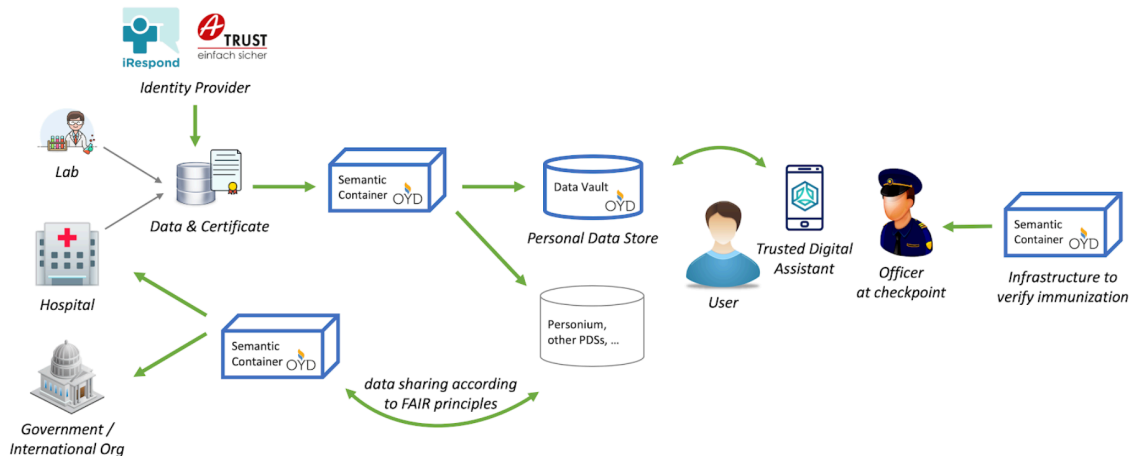
- Semantic Container

Semantic Containers provide a standardized infrastructure for data provisioning and allow data providers to efficiently distribute data without giving up control over its usage while providing data consumers with efficient and well-managed mechanisms to obtain and integrate data in a trustworthy and reproducible manner.

By packaging data and processing capabilities into reusable containers, describing the semantics of the content and permissible usage, and providing uniform interfaces, a data set becomes a commodity with well-defined content, properties, quality, and usage policy, as well as clear ownership rights.

DIP: Overall description

Human-centric health data and especially immunization information management faces a number of challenges that we plan to address in this proposal. Typically, data sets provided by health institutions differ greatly in format and content. We will be utilizing Overlays Capture Architecture (OCA), a flexible multi-dimensional schema architecture, to facilitate a unified data language so that harmonised data can be held in Semantic Containers and made accessible to Personal Data Stores using Common Endpoints inspired interfaces for Personal data Stores (CEPS).



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Logistics and miscellaneous (5 mins)

<https://wiki.trustoverip.org/display/HOME/2020-12-15+Weekly+Meeting>

News from the Operations Team

Nick Hayfack

(Inputs and Semantics WG representative on the ToIP Operations Team)

The purpose of the Operations Team is to create a small group of ToIP members who will share information on the workplans of our WGs, help ensure that draft deliverables are advancing as intended through the stages of the ToIP workflow, resolve any bottlenecks that arise around decision-making/approvals and discuss issues such as (for example) introducing firmer parameters for the creation of Taskforces under all WGs.

The Operations Team will not be directing or otherwise interfering with the development of content and deliverables in the WGs themselves.

ISWG Leadership positions

- › Inputs Group Chair
 - › **Robert Mitwicki**
- › Inputs Group Vice-chair
 - › **Sam Smith**
- › Semantics Group Chair
 - › **Paul Knowles** (*ISWG Lead*)
- › Semantics Group Vice-chair
 - › **John Wunderlich**
- › Volunteer via the meeting page at ...
 - › <https://wiki.trustoverip.org/display/HOME/2020-12-15+Weekly+Meeting>

Meeting schedule

- › **Inputs & Semantics WG** weekly meeting
 - › Tuesday, **December 22nd** @ 09:00 US PT / 18.00 CET
 - › Zoom link: <https://zoom.us/j/93406719136?pwd=SUozZHBQM0N5TUhYMhJqL0ZQM3I3Zz>



Closing Q & A

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