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Agenda

› 1. Welcome (Paul—2.5 mins)

› 2. Newcomer Introductions (Paul—2.5 mins)

› 3. Navigating the revamped wiki page: *Inputs and Semantics WG* (Paul—10 mins)

› 4. Evolution of OCA (Open discussion led by Paul/Robert—30 mins)

› 5. Human-readable schema specifications (Steven—10 mins)

› 6. Logistics and miscellaneous (Paul—5 mins)

  › a. News from the Operations Team

  › b. Leadership positions

  › c. Meeting schedule

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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)

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Navigating the revamped wiki page: *Inputs and Semantics WG* (10 mins)

Demonstrated by: P.Knowles

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

Navigating the revamped wiki page: *Inputs and 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.
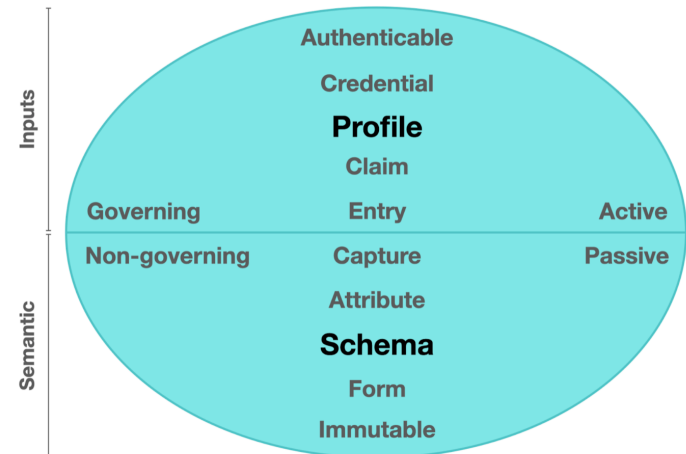
https://wiki.trustoverip.org/display/HOME/Inputs+and+Semantics+Working+Group

Inputs and Semantics Working Group

Created by Drummond Reed, last modified by Paul Knowles on Dec 20, 2020

- Introduction
- Scope
- Meetings
- Deliverables
- Chairs / Leads
- How to join
- Participation

Introduction

The Inputs and Semantics Working Group (ISWG) supports a practical approach to further enable the adoption o bringing a balanced view of decentralized network paradigms to the overall mission of Internet-scale digital trust system should be authenticable with the semantics providing meaning and context at the time of capture.

Inputs
- Authenticable
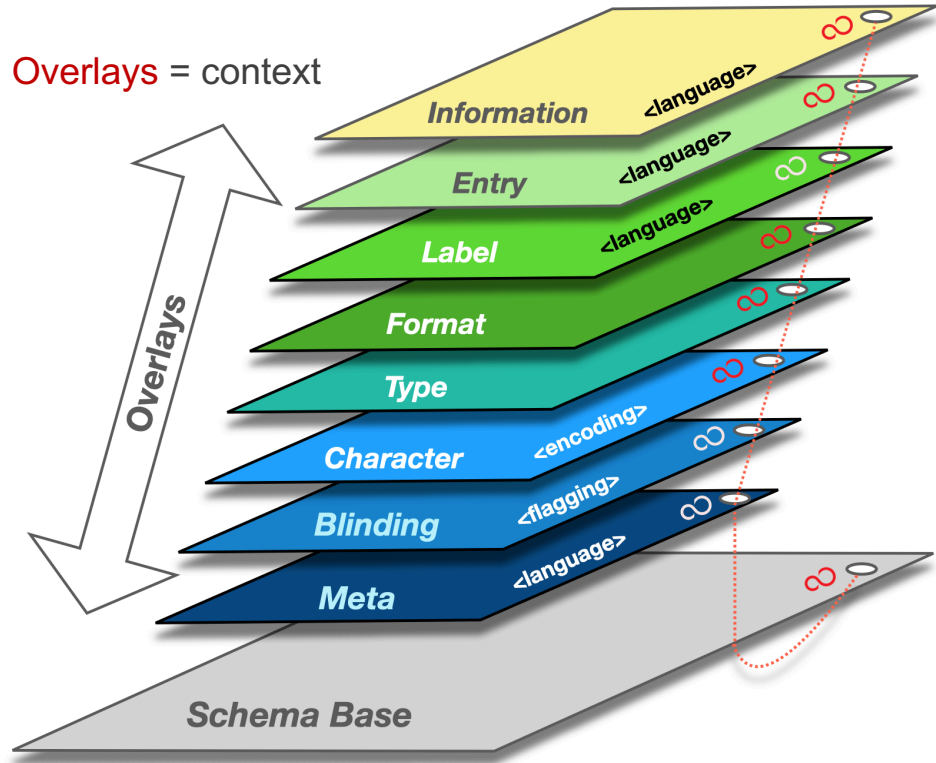- Credential
- **Profile**
- Claim
- Governing — Entry — Active
- Non-governing — Capture — Passive

Semantic
- Attribute
- **Schema**
- Form
- Immutable

Evolution of OCA
(30 mins)

Open discussion led by: P.Knowles/R.Mitwicki

https://humancolossus.foundation/blog/cjzegoi58xgpfzwxyrqlroy48dihwz

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Evolution of OCA

What might the next-gen version of OCA look like?
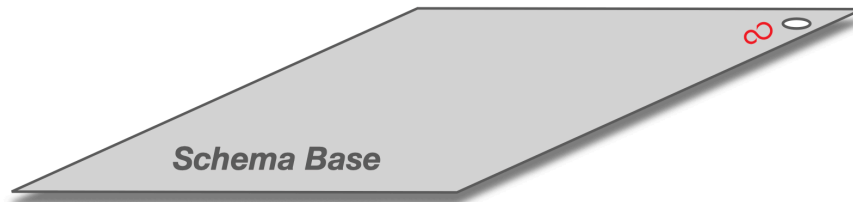
Overlays = context

Schema Base = shell

Schema Base

```json
{
    "@context":"https://oca.tech/v1",
    "type":"spec/schema_base/1.0",
    "classification":"GICS:35202010",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
    "attributes":[
        "_attr-1_",
        "_attr-2_",
        "_attr-3_",
        "_attr-4_",
        "_attr-5_",
        "_attr-6_"
    ]
}
```
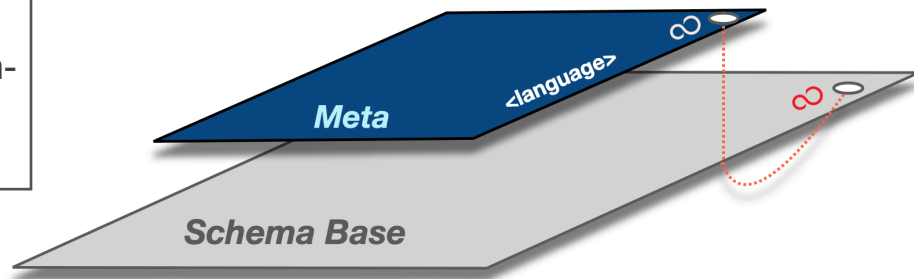
Normalised attribute names

Schema Base

Meta Overlay

```json
{
    "@context":"https://oca.tech/overlays/v1",
    "type":"spec/overlay/meta/1.0",
    "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6hsH",
    "language":"en_US",
    "name":"Demographics",
    "description":"Personal demographic data",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21"
}
```

By extracting the descriptive part of the meta data in the schema base into a separate meta overlay, it would allow for true internationalisation - both regarding the human-readable schema name and the description of the schema.
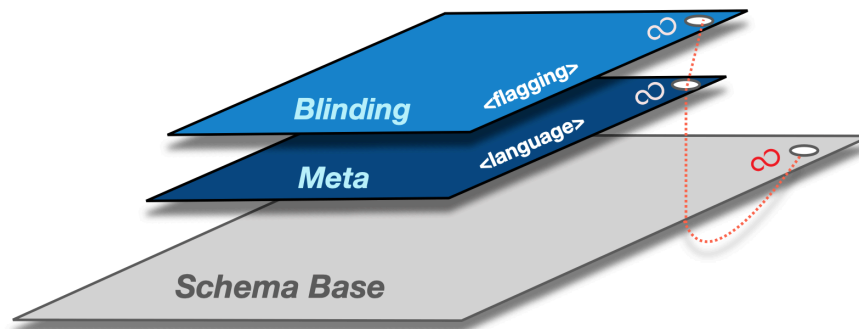
Blinding Overlay

```json
{
    "@context":"https://oca.tech/overlays/v1",
    "type":"spec/overlay/blinding/1.0",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
    "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6hsH",
    "role":"",
    "purpose":"",
    "attr_blinding":[
        "_attr-1_",
        "_attr-2_",
        "_attr-3_",
        "_attr-5_"
    ]
}
```

Flagging attributes that could potentially unblind the identity of a governing entity

Character Encoding Overlay

```json
{
    "@context":"https://oca.tech/overlays/v1",
    "type":"spec/overlay/character_encoding/1.0",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
    "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6hsH",
    "role":"",
    "purpose":"",
    "default_character_encoding":"utf-8",
    "attr_character_encoding":{
        "_attr-1_":"utf-8",
        "_attr-2_":"utf-8",
        "_attr-3_":"utf-8",
        "_attr-4_":"utf-8",
        "_attr-5_":"utf-8",
        "_attr-6_":"utf-8"
    }
}
```
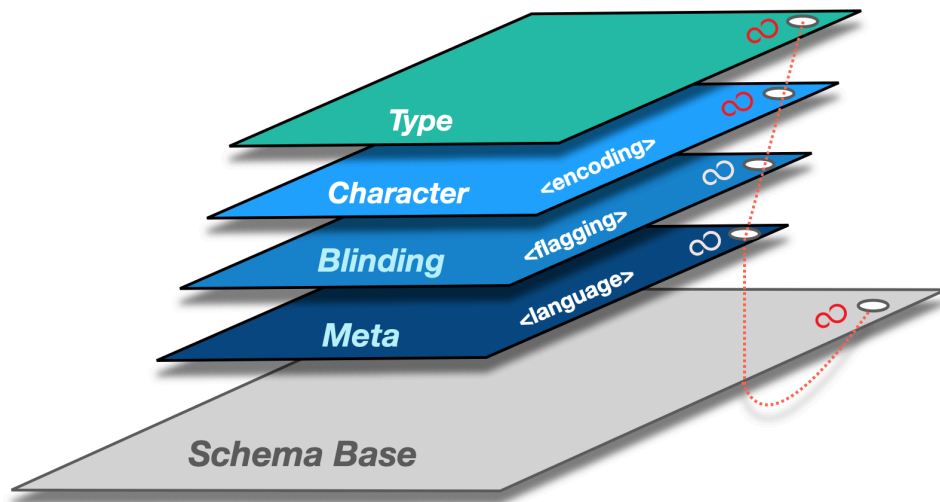
Character set encoding

Character <encoding>

Blinding <flagging>

Meta <language>
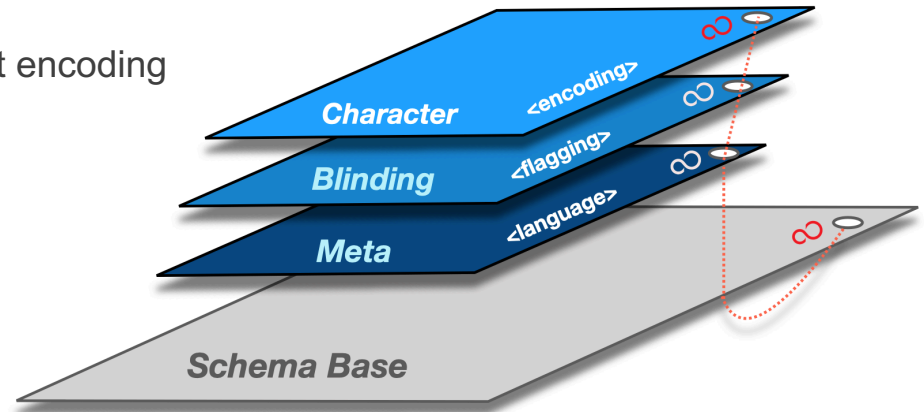
Schema Base

Type Overlay

```
{ ⊟
    "@context":"https://oca.tech/overlays/v1",
    "type":"spec/overlay/type/1.0",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
    "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6hsH",
    "role":"",
    "purpose":"",
    "attr_type":{ ⊟
        "_attr-1_":"text",
        "_attr-2_":"text",
        "_attr-3_":"text",
        "_attr-4_":"text",
        "_attr-5_":"date",
        "_attr-6_":"text"
    }
}
```
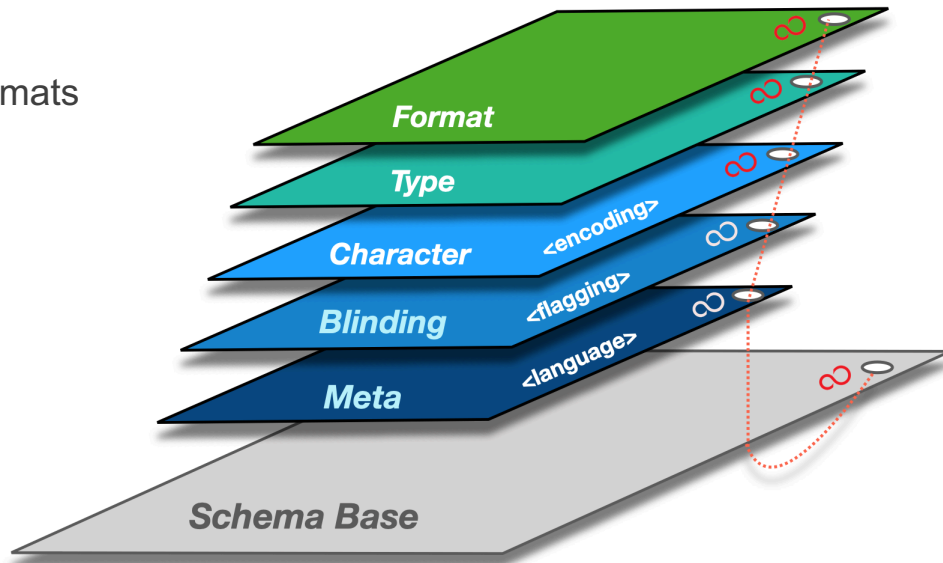
Attribute types

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Format Overlay

```json
{
    "@context":"https://oca.tech/overlays/v1",
    "type":"spec/overlay/format/1.0",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
    "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6hsH",
    "role":"",
    "purpose":"",
    "attr_formats":{
        "_attr-5_":"DD/MM/YYYY"
    }
}
```

Attribute formats
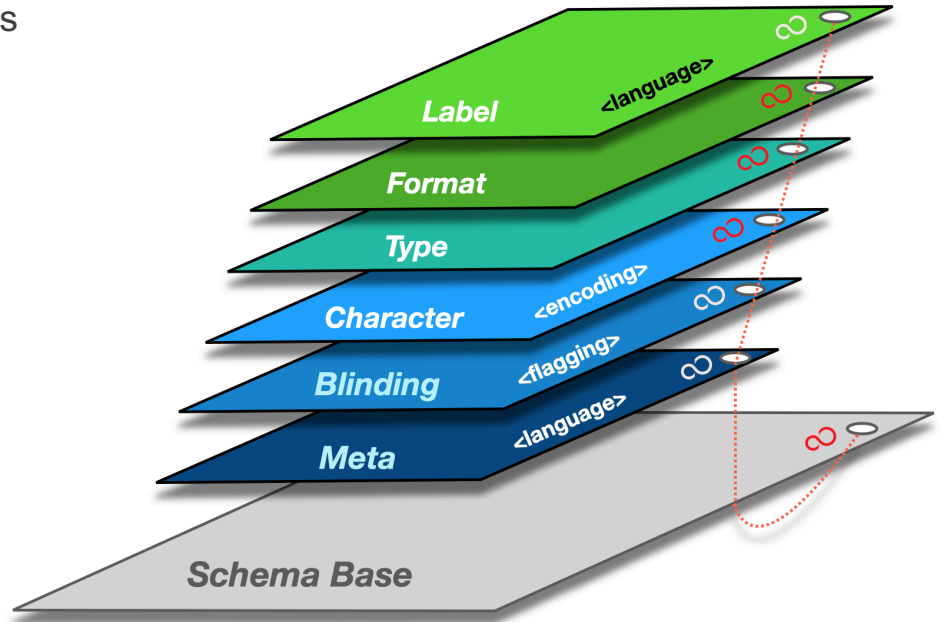
Label Overlay

```json
{
    "@context":"https://oca.tech/overlays/v1",
    "type":"spec/overlay/label/1.0",
    "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
    "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6hsH",
    "language":"en_US",
    "role":"",
    "purpose":"",
    "attr_labels":{
        "_attr-1_":"Email",
        "_attr-2_":"Given names",
        "_attr-3_":"Surname",
        "_attr-4_":"Preferred salutation",
        "_attr-5_":"Date of birth",
        "_attr-6_":"Sex"
    },
    "attr_categories":[
        "_cat-1_"
    ],
    "cat_labels":{
        "_cat-1_":"Personal"
    },
    "cat_attributes":{
        "_cat-1_":[
            "_attr-1_",
            "_attr-2_",
            "_attr-3_",
            "_attr-4_",
            "_attr-5_",
            "_attr-6_"
        ]
    }
}
```

Attribute labels

Categories

Category labels

Category attributes

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Entry Overlay

```json
{
  "@context":"https://oca.tech/overlays/v1",
  "type":"spec/overlay/entry/1.0",
  "issued_by":"did:example:ebfeb1f712ebc6f1c276",
  "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auP",
  "language":"en_US",
  "role":"",
  "purpose":"",
  "attr_entries":{
    "_attr-4_":[
      "Mr",
      "Mrs",
      "Ms",
      "Mstr"
    ],
    "_attr-6_":[
      "Female",
      "Male"
    ]
  }
}
```
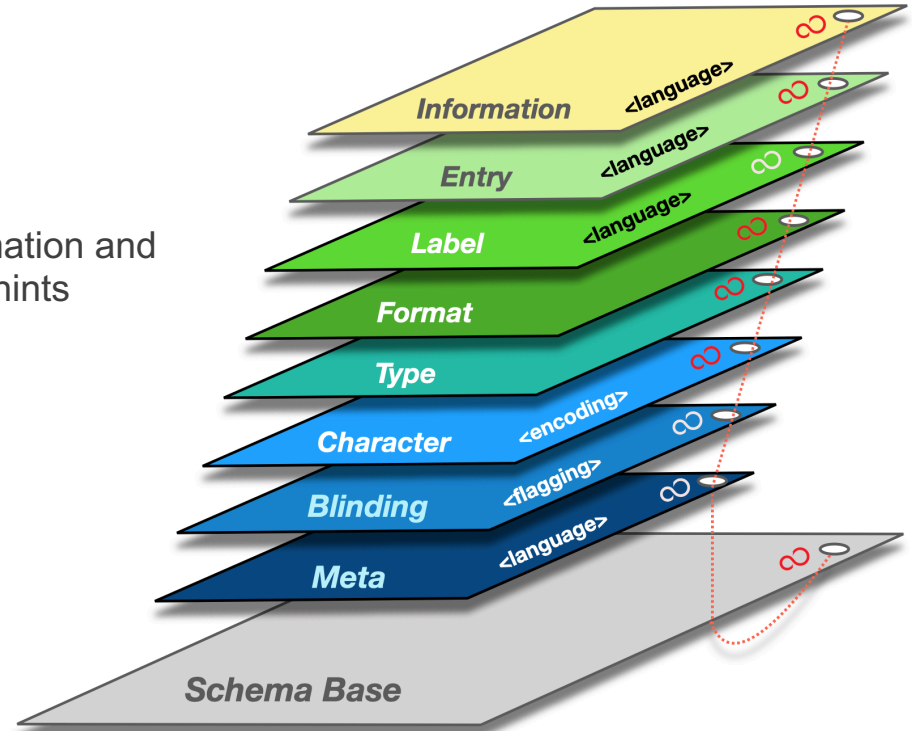
Pre-defined entries

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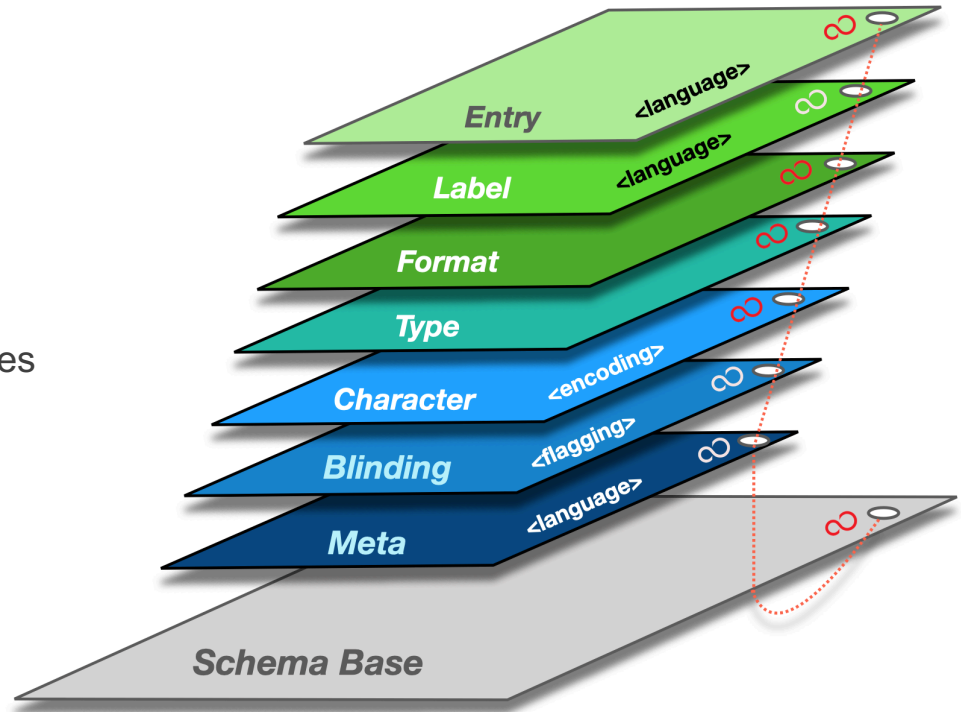
Information Overlay

```json
{
  "@context":"https://oca.tech/overlays/v1",
  "type":"spec/overlay/information/1.0",
  "issued_by":"did:example:ebfeb1f712ebc6f1c276e12ec21",
  "schema_base":"hl:5vLMW87oJu5wzQPDtQmD2PQ5auPBxneiMKtW7Yck6h
  "language":"en_US",
  "role":"",
  "purpose":"",
  "attr_information":{
    "_attr-1_":"An email address.",
    "_attr-2_":"A person's first (given) name.",
    "_attr-3_":"A person's surname.",
    "_attr-4_":"A person's desired salutation.",
    "_attr-5_":"A person's birthdate and optionally birthtime
    "_attr-6_":"A person's gender."
  }
}
```

Information and entry hints

Information   <language>
Entry   <language>
Label   <language>
Format
Type
Character   <encoding>
Blinding   <flagging>
Meta   <language>
Schema Base

Open Questions

1.) Separating the blinding block from the schema base

2.) Separating the attribute types from the schema base

3.) Separating the descriptive meta data from the schema base

4.) As the schema issuer would be publishing a set of objects rather than just a schema base (e.g. the *meta*, *character encoding*, *type*, *label* and *entry overlays*, etc.), use cases are really based on semantic context rather than a machine-readable base object. A predefined set of overlays together with the base object could be an "endorsed" schema. By signing the data processed by the OCA schema structure, captured data can be validated and "endorsed" as authentic by the original issuer. To discuss.

Human-readable schema specifications (10 mins)

Led by: S.Milstein

Human-readable schema specifications

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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 bottle-necking 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 29th** @ 09:00 US PT / 18.00 CET

   › Zoom link: https://zoom.us/j/93406719136?pwd=SUozZHBQM0N5TUhYMHJqL0ZQM3l3Zz

Closing Q & A

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