# The PID Info Type Use Case

## RDA P7 - Data Typing Working Group

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# PID Information Type (PIT)

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- is very basic metadata of DO
- used also/primarily for automated processes
- needs as much disambiguity as possible
- use *context free grammar* to define the content of a PIT
- JSON schema is an obvious approach here

# DTR



- gives a definition of a type in JSON
- provides schemas defining
  - how these definitions can be made, and
  - which fields need to be filled in.
- But the content of a type instance has to be validated
- and the **schema for a type itself is not defined** and cannot be derived in general
  - usual schema generators, that define schemas for gives json files derive schemas for how to define a type.
  - This is the *upward* schema, which is already known.

# DTR consequences



- Schemas for type instances need to be automatically derived from the type definition
- as an adaptions and expansion for DTR one needs definitions for type
  - that are usable to derive schemas for these types
  - and these schemas need to have enough descriptive power:
    - the derivable schemas should cover a considerable part of the JSON-schema possibilities
    - test case: is it possible to define JSON as a type?
- DTR adaption: give schemas for the definition of types that
  - are suitable to derive a schema from a type definition for instance validation

# Suggestion for DTR schemas



- use **Basic Types**, that have a pattern description by a regular expression
  - it provides
  - **identifier**
  - **regular expression**
  - beside *name*, *description*, *standards*, *provenance*
- and **Derived Types**, that have
  - **identifier**
  - and **properties** defined just by
    - **Basic Types** referenced by their identifier
    - **Derived Types** referenced by their identifier

# examples

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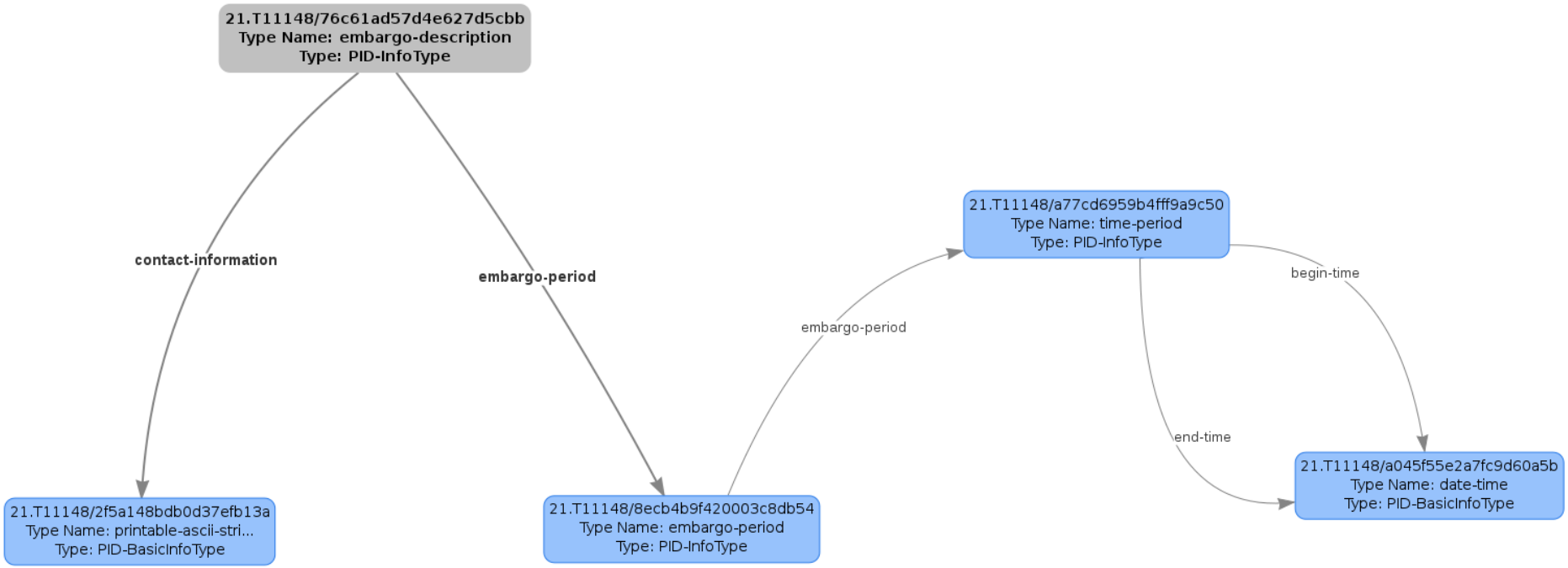
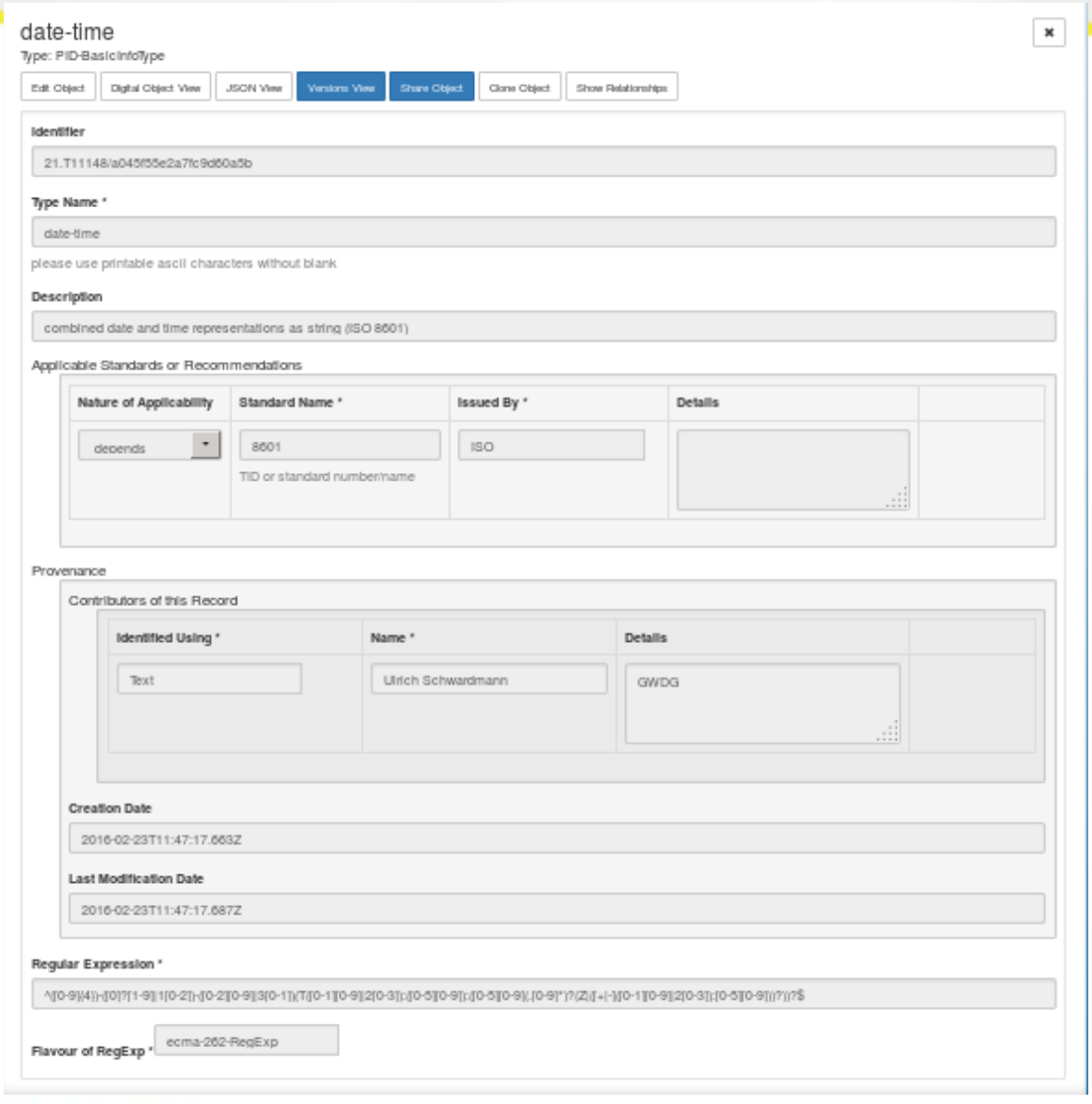


# examples

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DTR for PIT

# examples

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "definitions": {
    "21.T11148_a045f55e2a7fc9d60a5b": {
      "description": "date-time",
      "type": "string",
      "pattern": "^([0-9]{4})-([0]?[1-9]|1[0-2])-([0-2][0-9]|3[0-1])(T([0-1][0-9]|2[0-3])
:([0-5][0-9]):([0-5][0-9](.[0-9]*)?(Z|([+|-]([0-1][0-9]|2[0-3]):[0-5][0-9]))?))?$"
    }
  },

  "type": "object",
  "properties": {
    "time-period@21.T11148_a77cd6959b4fff9a9c50": {
      "description": "time-period",
      "properties": {
        "begin-time": {
          "$ref": "#/definitions/21.T11148_a045f55e2a7fc9d60a5b"
        },
        "end-time": {
          "$ref": "#/definitions/21.T11148_a045f55e2a7fc9d60a5b"
        }
      }
    }
  },
  "required": ["time-period@21.T11148_a77cd6959b4fff9a9c50"]
}
```

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