WP8b Session

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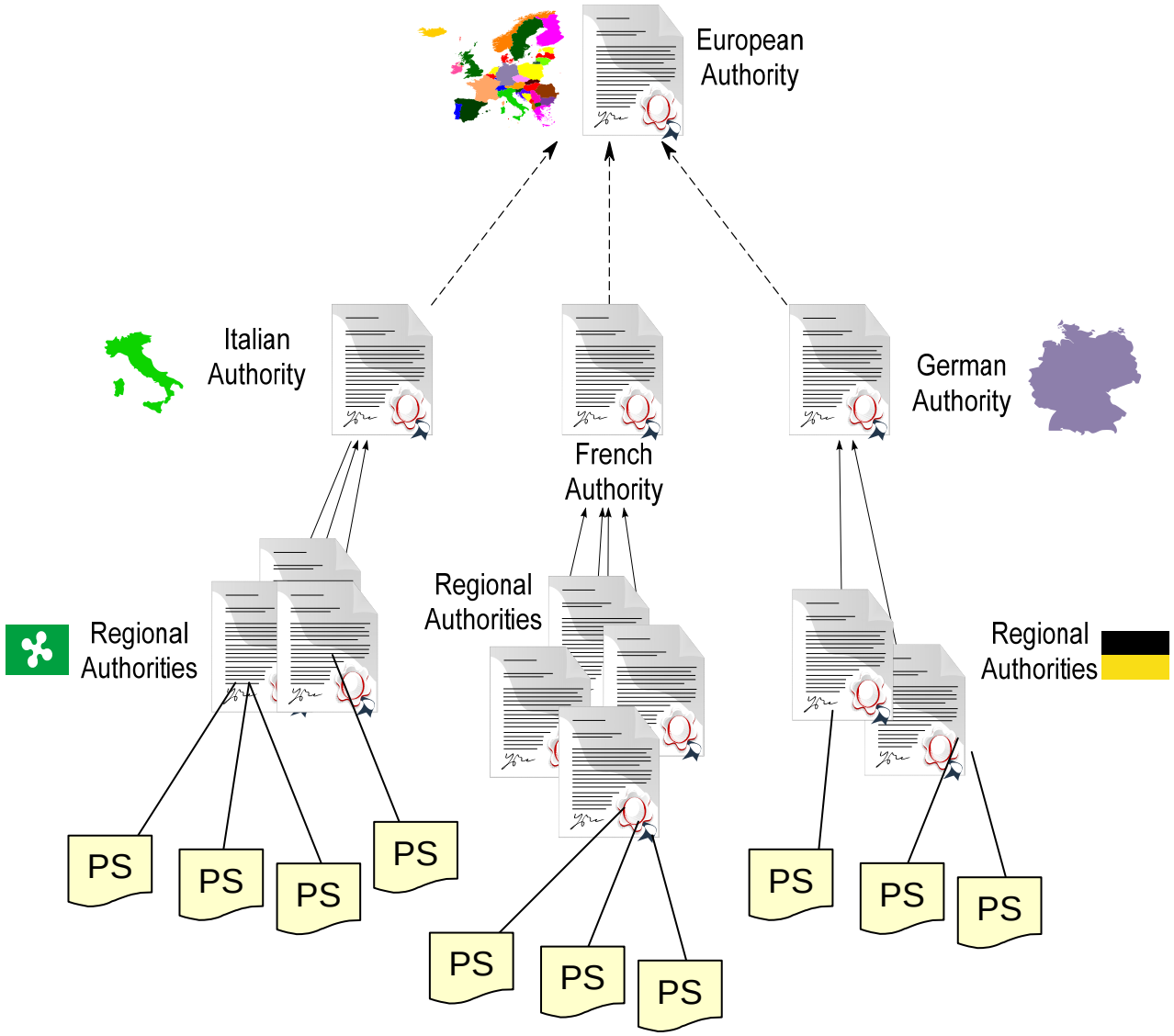
Agenda

- Tasks done since the last CM
- Open Issues and Discussions
  - Authorities Hierarchy and Summaries
  - Local vs. Global Attributes
  - How to model and to use the terms of the medical terminologies?
  - Use Unique Identifiers in EPS.wsml
- Tasks to do

Tasks done since the last CM

- Indicators and Success Factors
- Metrics for WP1 benchmark purposes
- EPS.wsml based on the CCR
  - EPSInstance1.wsml
- CCRSchema.wsml
  - CCR-Example.wsml
- CDASchema.wsml
- Submitted a Journal Article to UBICC

Open Issues and Discussions
Authorities Hierarchy and Summaries



Authorities Hierarchy and Summaries

- Each authorities (national, regional, local) has its own triplespace in the hierarchy
  - A triplespace manages the summaries of the citizens under the responsibility of the owner authority
- Each summary is treated in a subspace
- A summary may reference to other summaries
  - E.g. to link to the summary of the citizen's father
- Triplespaces don't overlap

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Authorities Hierarchy and Summaries

- How can a summary reference to another summary managed in another subspace?
  - Since a triple is made up of URIs, a triple in one subspace can reference to a triple in another subspace
  - The issue is: does the “query component” access and query across subspaces
  - WP2 is working in defining a way for linking subspaces

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Local vs. Global Attributes

- RDF serialization of WSML is not straightforward
  - WSML attributes are local. E.g.

    concept Test

    hasDescription impliesType Description

    concept HealthStatus

    hasDescription impliesType Description
  - The 2 *hasDescription* attributes are different
  - In WSML/RDF attributes are converted as properties and RDF properties are globally defined
    - It's not possible to have two different *hasDecription* attributes

- 3 options can be adopted…

Local vs. Global Attributes

- Option 1 – Unique attribute names

  concept Test

  TestHasDescription impliesType Description

  concept HealthStatus

  HealthStatusHasDescription impliesType Description

- Option 2 – Define the attribute at an higher level

  concept *ConceptWithDescription*

  hasDescription impliesType Description

  concept MedicalTest subConceptOf *ConceptWithDescription*

  concept HealthStatus subConceptOf *ConceptWithDescription*

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Local vs. Global Attributes

- Option 3 – Use binary relations

  concept *ConceptWithDescription*

  relation *hasDescription* (ofType *ConceptWithDescription*, ofType Description)

  concept MedicalTest subConceptOf *ConceptWithDescription*

  concept HealthStatust subConceptOf *ConceptWithDescription*

  instance JohnDoesTBTest memberOf MedicalTest

  instance johnDescription memberOf Description

  relationInstance *hasDescription* (JohnDoesTBTest , johnDescription)

- Which is the one to choose?
  - Decision: Option 2 has been chosen thanks to the straightforward serialization in RDF and the possibility to convert the ontologies in RDF if needed

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Open Issues and Discussions
How to model and to use the terms of the medical terminologies?

- The EPS ontology defines the code concept as:

```
concept eps#Code
    withValue impliesType _string
    hasCodingSystem impliesType CodingSystem
concept eps#Description
    hasCode impliesType Code
```

- A term of the UMLS terminology can be coded as:

```
instance umls#D12345 memberOf eps#Code
    withValue hasValue "12345"
    hasCodingSystem hasValue UMLS
```

- It can be used in EPS (and message ontologies) as:

```
instance description1111 memberOf eps#Description
    hasCode hasValue umls#D12345
```

Use Unique Identifiers in EPS.wsml

- Actors, Documents, Records,… have unique IDs

```
<xs:element name="Actor">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="ActorID" minOccurs="0"/>
            […]
<Actor>
    <ActorID>PERSON.268318.0</ActorID>
</Actor>
```

  - Is WSML-ized into

```
instance urn#PERSON_268318_0 memberOf Actor
    hasId hasValue “PERSON.268318.0”
```

- This may require to syntactically match the name of the instance
- Decision: Ontologies have to be updated to use explicit attributes for IDs

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Next Tasks before next CM

- Update the EPS.wsml and the CCR&CDA schema.wsml accordingly to what decided [TID, LFUI]
- Check if the current version of the ontologies is ok for the repository and the benchmarking [ONTO]
- Model the terminologies [TID]
  - UMLS, ICD-10, LOINC
- There can be others terminology used just for referencing to instances of terms as URI, and no mediation required
  - Geonames, Opencyc, …
- Go for more complete instances to finalize the work on the ontologies
  - EPS Instance1 [LFUI]
  - CCR Instance [TID]
  - CDA Instance [TID]
- Model the EPS.wsml summaries for the use case [CEFRIEL]
- Mediation in synergy with D4.3 [TID]
  - Design the mappings at instance level
  - Design the mappings at schema level