

# **Evaluation results**

There are three levels of importance in pitfalls according to their impact on the ontology:

- Critical It is crucial to correct the pitfall. Otherwise, it could affect the ontology consistency, reasoning, applicability, etc.
- Important Though not critical for ontology function, it is important to correct this type of pitfall.
- Minor It is not really a problem, but by correcting it we will make the ontology nicer.

#### Pitfalls detected:

#### Results for P08: Missing annotations.

3 cases

**Minor** 

This pitfall consists in creating an ontology element and failing to provide human readable annotations attached to it. Consequently, ontology elements lack annotation properties that label them (e.g. rdfs:label, lemon:LexicalEntry, skos:prefLabel or skos:altLabel) or that define them (e.g. rdfs:comment or dc:description). This pitfall is related to the guidelines provided in [5].

- The following elements have neither rdfs:label or rdfs:comment (nor skos:definition) defined:
- > http://www.w3.org/2006/time/TemporalEntity
- > http://www.ontologydesignpatterns.org/cp/owl/agentrole.owl#Role
- > http://www.ontologydesignpatterns.org/cp/owl/agentrole.owl#Agent

## Results for P10: Missing disjointness.

Ontology\*

Important

The ontology lacks disjoint axioms between classes or between properties that should be defined as disjoint. This pitfall is related with the guidelines provided in [6], [2] and [7].

\*This pitfall applies to the ontology in general instead of specific elements.

Results for P13: Inverse relationships not explicitly declared.

16 cases

Minor

This pitfall appears when any relationship (except for those that are defined as symmetric properties using owl:SymmetricProperty) does not have an inverse relationship (owl:inverseOf) defined within the ontology.

- This pitfall appears in the following elements:
- > http://www.example.org/ontology/music#isLocatedIn
- > http://www.example.org/ontology/music#performedAt
- > http://www.example.org/ontology/music#hasRole
- > <a href="http://www.example.org/ontology/music#hasMembership">http://www.example.org/ontology/music#hasMembership</a>
- http://www.example.org/ontology/music#hasRecordingSession
- > http://www.example.org/ontology/music#isPartOf
- > <a href="http://www.example.org/ontology/music#hasTimeInterval">http://www.example.org/ontology/music#hasTimeInterval</a>
- > http://www.example.org/ontology/music#reviewedBy
- http://www.example.org/ontology/music#hasSong
- > http://www.example.org/ontology/music#occurredDuring
- > http://www.example.org/ontology/music#hasTrack
- > <a href="http://www.example.org/ontology/music#performedBy">http://www.example.org/ontology/music#performedBy</a>
- > http://www.example.org/ontology/music#playsInstrument
- > http://www.example.org/ontology/music#memberDuring
- > <a href="http://www.example.org/ontology/music#recordedBy"> http://www.example.org/ontology/music#recordedBy</a>
- > http://www.example.org/ontology/music#membershipInBand

# Results for P19: Defining multiple domains or ranges in properties.

Critical

3 cases

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The domain or range (or both) of a property (relationships and attributes) is defined by stating more than one rdfs:domain or rdfs:range statements. In OWL multiple rdfs:domain or rdfs:range axioms are allowed, but they are interpreted as conjunction, being, therefore, equivalent to the construct owl:intersectionOf. This pitfall is related to the common error that appears when defining domains and ranges described in [7].

- This pitfall appears in the following elements:
- > http://www.example.org/ontology/music#hasTrack
- > <a href="http://www.example.org/ontology/music#hasDate">http://www.example.org/ontology/music#hasDate</a>
- > http://www.example.org/ontology/music#hasEndDate

#### Results for P36: URI contains file extension.

Ontology\*

Minor

This pitfall occurs if file extensions such as ".owl", ".rdf", ".ttl", ".n3" and ".rdfxml" are included in an ontology URI. This pitfall is related with the recommendations provided in [9].

\*This pitfall applies to the ontology in general instead of specific elements.

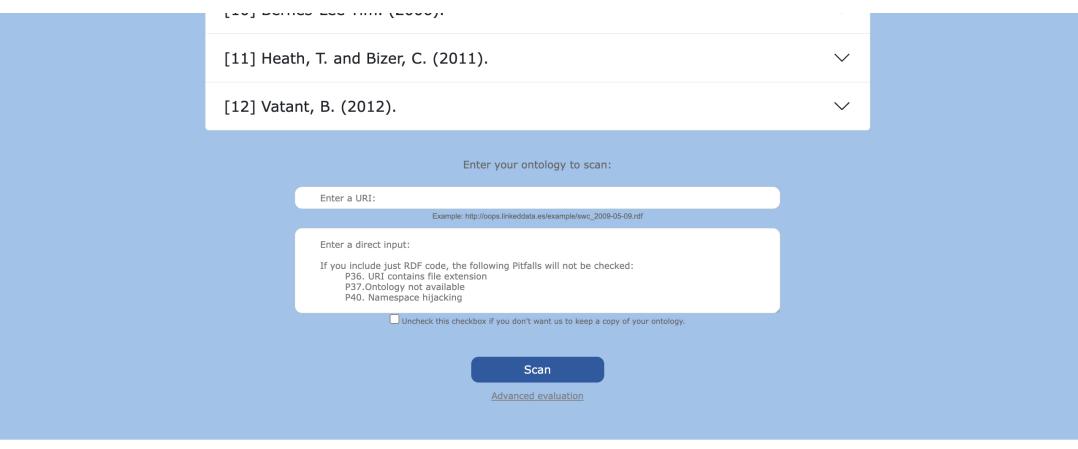
## Suggestions or warnings:



<a href="http://oops.linkeddata.es">
<img src="http://oops.linkeddata.es/resource/image/oops\_critical.png"
alt="Critical pitfalls were found" height="69.6" width="100" /></a>

# References

[1] Aguado-De Cea, G., Montiel-Ponsoda, E., Poveda-Villalón, M., and Giraldo- Pasmin, O.X. (2015).	~
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[10] Bernes-Lee Tim. (2006).	~



## How to cite OOPS!

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