ALIN Results for OAEI 2023

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Abstract
ALIN is a system for interactive ontology matching that has been participating in all OAEI editions since 2016. Since 2020, ALIN applies natural language processing (NLP) techniques to standardize the concept names of the ontologies that participate in the matching process.

Keywords
ontology matching, Wordnet, interactive ontology matching, ontology alignment, interactive ontology alignment, natural language processing

1. Presentation of the system

ALIN¹²³ is a system for interactive ontology matching which has been participating in all OAEI editions since 2016. Since 2020, ALIN applies natural language processing (NLP) techniques to standardize the concept names of the ontologies that participate in the matching process.

There were no modifications to the system compared to the year 2022.

1.1. State, Purpose and General statement

Since its 2020 version, ALIN uses Natural Language Processing (NLP) resources such as regular grammars (in fact, their equivalent regular expressions) and context-free grammars along with their respective lexical analyzers (scanners) and syntax analyzers (parsers).

These NLP resources make it possible to translate different patterns used in the two ontologies into unique one. This standardization allows ALIN to select better mappings for the domain expert to evaluate.

To perform the standardization step, since 2020 ALIN has a new phase before the program runs. In this phase, an NLP expert provides grammars, and their respective scanners and parsers, to the ontologies. ALIN uses these scanners and parsers during the execution of the program. This standardization step is possible in an interactive ontology matching system because:
1. We know before the program runs which ontologies ALIN will match, as we need to look for experts in the domain of ontologies to interact with the program.

2. The process of searching, meeting, and scheduling a day available for the expert to participate in the process can take a long time, probably a few days.

We can use this time of a few days until the execution of the program to develop the necessary grammars, scanners, and parsers for the ontologies.

### 1.2. Link to the system and parameters file

ALIN is available[^1] as a SEALS package (It can be run with MELT).

### 2. Results


### References


[^1]: [https://osf.io/pu7fvr/?view_only=736f83561cfe421eac34db8199939bc31](https://osf.io/pu7fvr/?view_only=736f83561cfe421eac34db8199939bc31)