



# Astronomical Object Types Ontology

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# Overview

- Work on instances
- Ontology and applications updates

# Work on instances

- Automated instantiation process complete
  - Automated creation of instances corresponding to a SIMBAD or NED entry for consistency checking
- Consistency checking on instances
  - Coded for both Protege-OWL API and OWL-API v2
  - OWL-API v3 port almost finished
  - Current APIs lack methods to check an instance without trying to infer its types if consistent
    - Inconsistency is processed extremely fast
    - Consistency leads to reclassification which kills performance
    - Hopefully OWLAPI v3 will allow such a check query to a reasoner

# Ontology and applications updates

- Ontology structure optimized
  - Better constraints obtained from application prototypes testing
  - Description Logic tuned down to ALCIN (minimal requirement for the expressiveness required)
  - Describing non-necessary restrictions conditions using inverse properties has never been done before
- Keyword mapping application complete
  - Can be turned into a service (I/O format to define)
- Vocabulary output added to keyword viewer
  - Allows a SKOS output of a keyword set tagging the ontology
- Updated technical notes published on the IVOA