**D4.2.1 Interface Control Document (ICD)**

ModelWriter

Text & Model-Synchronized Document Engineering Platform

Project number: ITEA 2 13028

Work Package: WP4 Knowledge Base Design and Implementation

Task: T4.2 - API of the Knowledge Base

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Apart from the deliverables which are defined as public information in the Project Cooperation Agreement (PCA), unless otherwise specified by the consortium, this document will be treated as strictly confidential.

Document History

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|  |  |  |  |

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1. Introduction

Role of the deliverable

This document provides the Interface Control Document (ICD), which specifies the API for accessing & manipulating the Knowledge Base.

The List of Technical Work Packages

|  |  |
| --- | --- |
| UC Code | Requirements derived from |
| WP2 | Semantic Parsing and Generation of Documents and Documents Components |
| WP3 | Model to/from Knowledge Base (synchronization mechanism) |
| WP4 | Knowledge Base Design and Implementation |
| WP6 | Architecture, Integration and Evaluation |

Structure of the document

This document is organized as follows:

Chapter 1 introduces the document.

Chapter 2 the interface.

Chapter 3 concludes the document.

Terms, abbreviations and definitions

|  |  |
| --- | --- |
| Abbreviation | Definition |
| RDF | Resource Description Framework |
| WP | Work Package |
| UC | Use Case |
| ICD | Interface Control Document |

1. Interface Control Document (ICD)

**package** synalp.commons.input.knowledgeBase;

**import** java.io.IOException;

**import** java.util.Set;

**import** com.hp.hpl.jena.ontology.DatatypeProperty;

**import** com.hp.hpl.jena.ontology.Individual;

**import** com.hp.hpl.jena.ontology.ObjectProperty;

**import** com.hp.hpl.jena.ontology.OntClass;

**import** com.hp.hpl.jena.rdf.model.Resource;

**import** com.hp.hpl.jena.util.iterator.ExtendedIterator;

**public** **interface** IOntologyAnalysis {

// Method that provides the list of the ontology's classes

/\*\*

\* **@return** a Set of OntClass(Interface that represents an ontology node characterising a class

\* description)

\*/

**public** **abstract** Set<OntClass> getClasses();

// Method that creates a text from the label skos definition

/\*\*

\* **@param** fileTextFromKB that is text from Knowledge Base

\*/

**public** **abstract** **void** CreateTextFromDefinition(String fileTextFromKB) **throws** IOException;

// Method that provides the list of the ontology's datatypesPoperties

/\*\*

\* **@return** an ExtendedIterator of DatatypeProperty(Interface that encapsulates the class of

\* properties whose range values are datatype values)

\*/

**public** **abstract** ExtendedIterator<DatatypeProperty> getDatatypeProperties();

// Method that provides the list of the ontology's objectPoperties

/\*\*

\* **@return** an ExtendedIterator of ObjectProperty(Interface encapsulating properties whose range

\* values are restricted to individuals)

\*/

**public** **abstract** ExtendedIterator<ObjectProperty> getObjectProperties();

// Method that provides the list of the ontology's individuals

/\*\*

\* **@return** a Set of Individual(Interface that encapsulates an individual in an ontology, sometimes

\* referred to as a fact or assertion, or a member of the a-box. In order to be recognised

\* as an individual, rather than a generic resource, at least one rdf:type statement,

\* referring to a known class, must be present in the model)

\*/

**public** **abstract** Set<Individual> getIndividuals();

// Method that provides the list of all ontology's concepts

/\*\*

\* **@return** a Set of Resource(An RDF Resource)

\*/

**public** **abstract** Set<Resource> getOntoConcepts();

// Method that provides the resources corresponding to a word

/\*\*

\* **@param** word which will be linked.

\* **@return** an OntClass(Interface that represents an ontology node characterising a class

\* description)

\*/

**public** **abstract** OntClass getResource(String word);

// Method that checks if two classes are disjoint or not

/\*\*

\* **@param** c1 that is OntClass (Interface that represents an ontology node characterising a class

\* description)

\* **@param** c2 that is OntClass (Interface that represents an ontology node characterising a class

\* description)

\* **@return** true or false

\*/

**public** **abstract** **boolean** isDisjoint(OntClass c1, OntClass c2);

}

1. Conclusion and way forward

This document provides the Interface Control Document (ICD), which specifies the API for accessing & manipulating the Knowledge Base.

In the second year of the implementation of these interfaces will be realized and integrated in the project.

References

N/A