**D3.2.1 M2M Transformation Framework architectural design document**

ModelWriter

Text & Model-Synchronized Document Engineering Platform

Project number: ITEA 2 13028

Work Package: WP3

Task: T3.2 - Specification and design of the M2M Transformation

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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.

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1. Introduction
   1. Role of the deliverable

This document is the first version of the description of the use cases proposed by the French consortium. It may be up-dated depending on the further details and requirements we get from our industrial use case providers.

* 1. 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 |

* 1. Conventions

The requirements are prefixed by “REQ-SR-WPz-xxx”, and are written in a roman typeface, where “REQ” stands for “Requirement”, “SR” indicates “Software Requirements”, “z” stands for the number of work package where the requirement is orginated and “xxx” is the positive integer identifier of the requirement. You can add this id (xxx) which is unique entire ‘requirements’ repository, at the end of <https://github.com/ModelWriter/Requirements/issues/> to access the latest version of the requirement.

* 1. Structure of the document

This document is organized as follows:

Chapter 1 introduces the document.

Chapter 2 describes the specification of the M2M

Chapter 3 describes the design of the M2M

Annex 1

* 1. Terms, abbreviations and definitions

|  |  |
| --- | --- |
| Abbreviation | Definition |
| RDF | Resource Description Framework |
| WP | Work Package |
| UC | Use Case |

This document consists of the specification and design of the M2M Transformation Framework whose main goal is to make the ModelWriter tool able to launch M2M (model-to-model) transformations including the following features:

* To obtain one or several output models from one or several input models.
* To configure the transformations to be able to produce different outputs using the same inputs.
* To compose simple transformations to obtain more complex ones.
* To keep traces between transformed models and its source models.
* To synchronize the output models after its input models or configurations have been modified.
* To synchronize the output models without changing the modifications that users or processes may have made on them after the transformations was finished.

1. Specification of M2M Transformation

The following image offers an overview of the components of the M2M Transformation Framework.



**All the components will be designed as Eclipse plugins in order to make the framework usable and extendable by third-party companies.**

1. Design of The M2M Transformation

* Previous big Picture
* Based on the previous architecture

1. Conclusion and way forward

References

1. Baldwin, Timothy, Emily M. Bender, Dan Flickinger, Ara Kim and Stephan Oepen (2004) Road-testing the English Resource Grammar over the British National Corpus, In Proceedings of the Fourth International Conference on Language Resources and Evaluation (LREC 2004), Lisbon, Portugal.
2. …

Appendixes

Appendix 1

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