Summary[1]

Automated transformation of NL to OCL constraints via SBVR

This paper present a neoteric method of generate OCL statement which is equivalent to natural language by using OpenNLP and SBVR.

Our tool is one such tool which automatically transforms natural language (NL) statements to Object Constraint Language (OCL). Open natural language processing (OpenNLP) is implemented to take care of the pre-processing of NL statements. The pre-processing phases are sentence splitting, tokenisation, parts of speech (POS) tagging and lemmatisation.

In Preliminaries we introduce SBVR (Semantic of business analysis and rule It describes the desired vocabulary and rules for providing the semantic documentation of vocabulary, facts and rules of business, after this we will generate SBVR rule. Structural rule and behavioral rule are the two types of SBVR rules. The structural rule defines the organizational setup whereas behavioral rule describes the conduct of an entity.

After this we do logical formation by using logical operator multiple fact type is composed for SBVR rule. From the extracted vocabulary the required tokens are identified to map the logical operators. Tokens such as not, no are considered as the logical operator negation (⌐). That, and are denoted as conjunction ( ∧) similarly or is disjunction (∨) and tokens like infer, imply, indicate, suggest are considered as the logical operator implication (→) than Quantification gives the scope of the concept and it is applied in this work by mapping the tokens as given below:

More than, greater than → at least n quantification

Less than → at most n quantification

Equal to, positive statement → n quantification