

**NATURAL LANGUAGE GENERATION FROM
STRUCTURED DATA BY AUTOMATING PROLOG
RULES**

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Abstract

Natural language generation is a sub field of Natural Language Processing which is an important part of artificial intelligence and computational linguistics. It is not about making computers print simple texts. Natural language generating systems use application domain and knowledge about language to automatically produce help messages, documents, reports and various type of texts. At present, work in natural language processing and natural language generation is at an exciting stage in its development.

The ultimate goal of a system that does Natural Language Generation is to convey a meaning, simple or complex, through natural language. But the challenge is how to describe and represent meaning in first place. To make a computer to be able to process language and meaning it is important to look at the representation of meaning from a different, more abstract perspective. From the past, the field of semantics have turned to logic to develop a language that can represent the meaning of natural language. The predicate logic has been used to describe the abstract meaning of a sentence by means of deduction. The Discourse Representation Theory which is more advance version of the predicate logic is highly used in the context of natural language generation.

RDB2PR provides a new design and a methodology to generate natural language descriptions using logic rules. The automation of prolog facts and rules in the context of logic rules is the novel result of this dissertation. In the automation process of the Prolog rules and facts, Semantic technologies are used to map the relationships of the tables in the relational database. The project provides a low computational resource cost text generation and this framework can be used for any small domain text generation purposes where data reside in a relational database.

Keywords: Natural Language Generation, Prolog, Semantic Technologies, Prolog Automation