ABSTRACT

DENI ROMADONI. The Development of Word Graph Formation System For Indonesian Text. Under the direction of SRI NURDIATI.

Knowledge graph is a new method which is used to describe and model natural language or human language. A word is a basic unit of natural language processing. Word graph is a graph which has connected structure of words. Ontology between word and token in word graph is represented by a node, 8 binary relationships, 4 frame relationships, and a focus. In this research, a system to construct a word graph from Indonesian text is developed. The software was initially developed by Mark van Koningsveld, which is called DelftCoStruct. On the previous version, knowledge graph method is not fully implemented. The first step in this research is analyzing the outline description and the requirement system. There are three principal requirements: formation and modification of word graph, analyzing text in word graph, and saving the dictionary capabilities. The second step in this research is designing specification system. The third step is developing and implementing the system designed. And the last step is validating system, to ensuring that all the requirements is fully implemented on this system.

Keywords: natural language processing, knowledge graph, word graph, token, ontology, frame