## Abstract

Search process using conventional manner will confuse the I-GRACIAS users, if keyword has different words with existing application names. Semantic similarity is one of approach to handle searching using term relatedness score from Wordnet. Semantic similarity approach, which used in this rasearch, is Path-based with Wu and Palmer (WUP) as semantic similarity computing method. Omiotis is a method to compute relevance degree between document. There are two primary components from Omiotis measurement such as lexical relevance and semantic similarity.

In lexical relevance, Omiotis do weighting process for each lexical using TF\_IDF. After that, Omiotis compute lexical relevance from document pairs, which use harmonical mean from TF\_IDF results. Lexical relevance is very influential, because it will be increase relevance degree from Omiotis result such as described in experiment results.

Omiotis evaluation conducted by Semeval 2014 task 3 dataset and I-GRACIAS dataset. Using those dataset can be proved that Omiotis can be implemented with I-GRACIAS data. Based on test results with I-GRACIAS dataset, Omiotis has Pearson correlation score about 0,38. While Semeval 2014 task 3 dataset, Omiotis has Pearson correlation score about 0,29 and reach the rank 30 from 38 participants. Moreover, with Semeval 2014 task 3 dataset, Omiotis is better than PairingWord, where this PairingWord is different with PairingWord which introduced by Meerkat\_Mafia, although its method is still same as PairingWord from Meerkat\_Mafia and the difference lies in semantic and preprocessing step.

Therefore, Search process which using conventional manner, was amended by Semantic Textual Similarity (STS) approach and used Omiotis measurement to compute similarity between document with Path-based approach as the Semantic Similairty method, which still has dependence on Wordnet. So that it can help the search process problem in I-GRACIAS.

Keyword: semantic similarity, lexical relevance, Omiotis, PairingWord, Wordnet.