

## PROJECT SPECIFICATION

<b>1.0 BASIC INFORMATION</b>
<b>1.1 Project Title</b>
A Real Time Multilingual Customer Sentiment Mining – (Telekom Domain) Phase 1
<b>1.2 Project Objective/Purpose</b> (Please describes the measurable general and specific objectives of the project and defines the expected results. Use result-oriented wording with verbs such as to define, to determine, to identify, to investigate.....) <i>For research type of project</i> , please include research objective as the primary objective
<p>The main objective of this research project is how to capture the people's opinions /sentiment and utilize this information in decision making to improve Telekom's product and services offerings and as well to engage unstructured complaints (reasons of complain).</p> <p>To be precise:</p> <ul style="list-style-type: none"><li>• To design and develop a prototype of corpus and opinion lexicon</li><li>• To develop a scalable Sentiment Mining framework (<b>TELSense</b>) for understanding the sentiment posted by people in Malay</li></ul>
<b>2.0 PROJECT JUSTIFICATION</b>
<b>2.1 Problem Statement</b> (Please state the problem which relate to this project)
<p>Social media is a powerful tool for spreading information. It reaches faster and farther than any communication method to date. It has become an integral part of the lives of billions. Most of the online conversations are using are using abbreviations and slang language. Therefore, analysing sentiment becomes a difficult problem. Also, sentiment mining is domain specific. The abbreviation and slang language used in Malaysia may be different compared to other part of the world. Most of the sentiment analyses currently are useful only to process comments that are in English. In other words the existing approaches for sentiment mining are linguist dependent and most of these available applications are mainly for analyzing texts in English. In addition, Malay language differs in term of structure and complexity compared to English. Therefore, these tools cannot be directly used to analysis the sentiment expressed in Malay. Till this date, no annotated corpus or opinion lexicons available in Malay. Therefore in this research we want to capture the peoples' online sentiment and analysis the sentiment expressed in Malay.</p>
<b>2.2 Proposed Solution</b> (based on problem statement, list out the solution/s that this project could offer or the product that could be derived from the project. Discuss and compare the solution/s available in the market with that produced by TMR&D)
<p>People, are talking about the product and its business everyday positively or negatively by means of feedbacks, opinions, comments etc through various social platforms. Most of the people in Malaysia express their opinion in Malay. In this research we are proposing to develop lexicon and corpus in Malay language. Therefore, the sentiment mining application developed in this reseach can be utilized to analyse and understand the sentiment posted in Malay language.</p>
<b>2.3 Business Opportunity</b> (Give a brief orientation on the business opportunity related to project outcome. If applicable, provide information on the market situation for the project outcome. This includes information on status of customer agreement, profitability calculation for the project outcome, technology trends, competitors and cooperative products and market window.)
<p>Sentiment mining is a systematic, organized, and powerful way to analyze social media information and extract the valuable information in it without needing to read through every piece of content. Using the power of analytics, key areas of importance can be identified, and these areas can then be investigated further. This can optimize the time spent by focusing the analysis on those areas that are of the greatest potential benefit to any organization or Government.</p>

German Research Center for Artificial Intelligence, DFKI GmbH  
Trippstadter Straße 122  
D-67663 Kaiserslautern  
Germany

- Prof Dr Saravanan  
University of Majmaah, Arab Saudi
- Prof Dr Abdullah Al Hussein  
University of Majmaah, Arab Saudi
- Assoc Prof Rajkumar Kannan  
Bishop Herber University, India