UNIVERSITI TEKNOLOGI MARA

DEVELOPING A FORECASTING MODULE USING NEURAL NETWORK IN CRM SYSTEM: A CASE STUDY AT SYNCHRO WEB TECHNOLOGY

SHAKIRAH BINTI HASIM

IT Project submitted in partial fulfillment of the requirements for the degree of

Master of Science (Information Technology)

Faculty of Computer and Mathematical Sciences

February 2013

ABSTRACT

The use of Neural Network technology nowadays is become popular in such many application area. This thesis will be focused on the case studies of Synchroweb Technology Sdn. Bhd on their Customer Relationship Management System (CRM System). The CRM system will be enhanced on the forecasting module. The forecasting module is to forecast the monthly income for that company or in other word the collection of invoices for current month. It is developed using Matlab software and Neural Network tools which integrated inside the Matlab software. The methodology of doing this is Rational Unified Process (RUP). RUP process consists of 4 phases which are Inception phase, Elaboration Phase, Construction phase and Transition phase. The output from the forecasting is to forecast the next month revenue based on the regression analysis graph and need a calculation. The comparison of the accuracy and the output is recorded inside the Accuracy table. Other than that, the output from the program will be represented using dashboard. The dashboard include is train data (actual revenue) and forecast data. The dashboard helps the CRM system functionality and become beneficial to give a full picture on company health.

ACKNOWLEDGEMENT

I give thanks to Almighty God for the blessings and His pleasure because I can also complete the paper work which my final year project in order to meet the requirements to obtain a Master of Information Technology.

Infinite gratitude and thanks goes to Mr. Saharbudin Nairn, my supervisor as too much help, guide and also as facilitators to me throughout the process of completing this paper. Without a strong guidance from him, I might not be able to produce a good paper. Heartfelt appreciation also goes to all lecturers, involved directly or indirectly in making this paper.

Not forget to thank my beloved friends for their support and encouragement as well as their brilliant ideas at the time I run out of ideas like Marco Leong, Eugene Lee, Shariza, Nora, Dr. Zailani Abdullah or any other name that may be involved. To my CEO Synchroweb Technology, Mr Pang Wee Tak, thanks a lot for your cooperative. Also to my parents, and as well as my husband, for their support. A million thank from the bottom of my heart.

If no names and the people involved in the above, this paper may not be completed successfully. Many thanks also go to any of the persons who are directly involved in the completion of this paper. Thank you very much.

TABLE OF CONTENTS

CHAPTER THREE: METHODOLOGY