

## **ACKNOWLEDGEMENT**

I would like to express my sincere thanks to people who have contributed either directly or indirectly to this thesis and the preparation of this report, Assoc. Prof. Dr. Thongchai Srinophakun, the thesis advisor, for the guidance throughout the course of this work. He has taken care of me in every step of this work and gave me many materials and valuable suggestions. I would like to thank Assoc. Prof. Supa Harnnongbua for many guidances and suggestions about using method in simulation. I am thankful for Dr. Kiattawee Choowongkamon for many discussions and suggestions in this work. Moreover, I am thankful for Assoc. Prof. Apinya Duanchan and Assoc. Prof. Khantong Soontarapa which is chairman and external committee in defense examination, respectively. In addition, I would like to thank Mr. Preechatorn Jirachaithorn and Mr. Warasak Limniyakul for suggestions about English writing and grammar checking.

Finally, I wish to extend my gratitude to my parents and friends who supported and advised many things for me with their encouragements, helps and discussions on this work.

Pirawat Thongjun

April 2007