

Acknowledgments

I would like to deeply and gratefully thank to my advisors, Prof. Don McNeil and Asst. Prof. Paktra Kooburat for their invaluable supervision and examining the thesis, and Dr.Yupadee Chaisuksant, Mr.Grit Watanapuck for their help with English writing and Miss Wanlapa Pornwiriyaamongkol for her help with programming.

I would like to express my thanks to the examining committee, Assoc. Prof. Yindee Saklertwachara and Asst. Prof. Suntipong Plungsuwan , and I would like to express my thanks to all the teachers and staff of the Department of Applied Mathematics and Computing, Faculty of Science and Technology, Faculty of Prince of Songkla University, Pattani Campus.

My thanks also go to Graduate School, Prince of Songkla University for financial support in thesis preparation, Institute of Southern Thai Studies and Thaksin University, Songkhla for supporting my Master study.

Finally, I would like to thank Mrs.Lyn McNeil, Miss.Chamnein Choonpradub, Miss.Phattawan Thongkumchum, Miss.Niramom Sutummakid and Miss.Nittaya Chirtkiatsakul for their kindness advice during my stay in Australia.

I would like to thank my mother very much for her support and encouragement in everything.

Ratchakrn Witchurangri