Acknowledgements

It is a pleasure to show my gratitude to many people who have made this thesis possible.

I could not overstate my sincere gratitude to my advisor, Dr. Chi-yee Lin, for his good instruction and efforts. His support for my research is like the air to the dying out sparkle. Without his constant guidance and his great patience, this thesis would not be possible. With his remarkable advice in our numerous meetings he always provides me a lot of insight and muster up my courage in the process of doing my research.

I would like to especially thank the committee members, Dr. Tai-shiung Yang and Dr. Ming-chung Yu, for their prudent and valuable suggestions and comments.

I would like to show my gratitude to all of my classmates in NCCU. The days would have passed far more slowly without their emotional support and generous sharing in learning.

I am indebted to my colleague, Bright, Dai, who has helped me collect data and given prompt aid at work.

I owe a great deal to my best friends, Yuan-ti Zhuang and Jin-long Li, who constantly encourage me and do me a favor when I encounter difficulties.

I would like to thank my parents, Dong-yue Tsao and Pei-Fen Huang, for raising me, supporting me, and loving me.

I am grateful to my brother, Siao-yuan Tsao, for giving me unstinting assistance in

solving problems in my research. His words lead me to discover another treasurable field that I have never treaded on before. And his academic performance inspires me to be strong and happy.

Finally, my appreciation goes to my fiancé, Jian-yo Lin, who helps me get through the difficult times. His emotional support and mental inspiration alleviate my worries. His persistent love and patience is a nourishing drink on the rugged and rough road. He makes me recognize my mistakes and helps me grow. I heartily appreciate his company. It is he who leads me to discover the pot of gold by the end of rainbow.