

ACKNOWLEDGMENTS

This study has been accomplished with the help and cooperation of some important people who have provided support and guidance for this work. My most profound gratitude goes to my thesis advisor Associate Professor Prapaisri Sudasna-na-Ayudhya and my major committee Associate Professor Peerayuth Charnsethikul, for their direction, excellently helpful, kindly suggestion and encouragement. I would like to express my deepest gratitude to Associate Professor Vira Chankong for allowing me to use CPLEX 8.1 and thanks to his helpful and suggestion. Furthermore, I would also like to thanks to Associate Professor Saree Svetasreni and Assistant Professor Punpiti Piamsa-nga, for their helpful and suggestions. Finally, I would like to extend a special thanks to Associate Professor Kamlesh Mathur for his significant contributions in terms of research methodology in the graphical method.

Suwitchaporn Witchakul

September 2007