

## DEDICATION

I dedicate this thesis to:

The first, Allah who are omniscient and have all the knowledge in the world. Then, to prophet Muhammad SAW, who makes a guide in my life from His Sunnah. Special dedication to, My beloved parents, Mama and Waled, and my beloved siblings, Fira and Ahan, also my dear wife, May Amini, who always support me, give some motivation to finish this thesis, and give me some suggestion to be a better person for better life. I dedicate this thesis to my great supervisors, Dr. Putu Harry Gunawan and Yanti Rusmawati, Ph.D. To all my friends who always support me to finish this thesis. The last, I dedicate this thesis to my homeland, Indonesia, and Telkom University as my campus, hopefully this thesis can be useful for science development in the future.

My big thanks to all of you.