ACKNOWLEDGEMENT

This thesis has been make possible through the support and contributuions of many parties. The author would like to extend hearthfel appreciation and sincere thanks to the following:

- 1. First and foremost, to Allah SWT, the author offers boundless gratitude for the ease, strength, and countless favors granted throughout the journey, enabling the successful completion of this thesis,
- 2. The author would like to thank my family, father, mother, and youngest sibling who have always offered prayers and encouragement to the author. This has given the author the energy and motivation to complete this thesis.
- 3. To both supervisors, Dr, Ir, Herioe Wijanto, M.T and Dr. Ir Meiditomo Sutyarjoko, M.Sc. The author conveys deepest gratitude for their time, insights, guidance and invaluable feedback throughout the research and writing process. May they always be granted good health and abundeant blessings.
- 4. To Kayla Ayu Rachmayastuti thank you for being not only supportive, but also fir the help, encouragement, and knowledge shared that contributed to the successful completion of this thesis.
- 5. To the Nanosatellite Laboatory team, sincere thanks for their instrumental role and support throughout the research simulations.
- 6. To Satellite Operation Department team, who alwas give the author energy and knowledge, to keep the author's spirit in completing this thesis research.
- 7. To the all lectures and staff at Telkom University, thank you for the education, guidance and assistance that supported the author throughout this academic journey.