

## ACKNOWLEDGMENTS

All praises to Allah SWT for blessing, the power, and all good fortune that have given to me so that the thesis can be completed. Special thanks for everyone that supports, for all suggestions, contributions, and guidances:

1. My loving family, my mother and my father, who always support and pray endlessly for author and also for my sister. May Allah SWT always bless us all.
2. Dr. Ir. Jangkung Raharjo M.T. as my first supervisor who always patiently guiding the author in completing this thesis. I would like to thank Pak Jangkung so much for the knowledge, kindness, support, and prayer.
3. Kharisma Bani Adam S.T., M.T., Ph.D. as my second supervisor who has provided guidance, advice, criticism, and patience in guiding the author to finish this thesis.
4. Dr. Koredianto Usman S.T., M.Sc. and Dr. Rizki Ardianto Priramadhi, S.T., M.T., as my advisor and judgment in final defense thesis seminar who have already given advices and critics very well to my thesis.
5. Mr. Ruddle Cahyadi as admin of Telkom University Graduate School, who helped me a lot.
6. PLN UP2D Makassar especially SCADA & Telekomunikasi Team for the support, encouragement, and attention that has been given to the author.
7. Thanks to all my friends who also support me.

And other people who can't be mentioned by the author one by one.