

ACKNOWLEDGE

The author would take this opportunity to convey his sincere gratitude to everyone who has supported and assisted with this undergraduate thesis. This undergraduate thesis is being presented in order to satisfy one of the criteria for earning the Bachelor of Science in Telecommunication Engineering. This research will also will not be possible without the help of the supervisors in direct or indirect ways. In particular, my gratitude to:

1. Prof. Dr Rendy Munadi as my first supervisor and Miss Sussi.SSSi .M.T. as my second supervisor deserve special thanks for their invaluable guidance and advice in helping me finish this bachelor thesis.
2. Mr.Agus Dwi Prasetyo ,S.T.,M.T. as an Academic Advisor for the class TT-43-INT who provided guidance and direction for four years of college.
3. Mrs.Dr.Leanna Vidya Yovita,ST.,MT. as the Lecturer for this Final Project whose guidance helped the author to organized and complete this research thesis.
4. My classmates Ikhsan, Irgi, Alvaro, Ratna, Alfarizi, for showing their love and support.
5. All of my lab colleagues, especially the head of MBC Laboratory Nasrullah Pandu for giving permission to the author to borrow lab equipment that help complete this research thesis.