

PREFACE

Alhamdulillah, all praise and gratitude be to Allah the Most Gracious and Most Merciful. With His will and blessings, I was able to complete this master research thesis entitled "Techno-Economic Feasibility Study of Hybrid FSO/RF Transmission for Rural Internet Connectivity (Case Study: Dalisodo Village, Malang)".

This thesis is submitted as part of the academic requirements for the Master's Program in Electrical Telecommunication Engineering, with a specialization in Regulation and Management of Telecommunication (RMT), School of Electrical Engineering, Telkom University.

The idea for this research was driven by the need for a sustainable and accessible communication infrastructure in rural areas. The integration of Free Space Optics (FSO) and Radio Frequency (RF) as a hybrid model presents a promising solution, especially in regions with limited fiber backbone access. The village of Dalisodo in Malang Regency was selected as the case study to contextualize the technical and economic feasibility within real field constraints.

I am especially grateful to my parents for their prayers, trust, and lifelong encouragement. Your faith in me has been a constant source of motivation. I would also like to thank my siblings and entire extended family for standing by me with unwavering support.

To my dearest friends, thank you for helping me stay grounded and optimistic. Your friendship and encouragement were priceless throughout this journey. This thesis certainly has its limitations, and I humbly acknowledge them. I welcome any constructive feedback and suggestions to improve the content and rigor of this research.

It is my hope that this work will provide practical contributions to the field of telecommunication, particularly in supporting digital inclusion in underserved rural areas. May this study also inspire further research, technological innovation, and regulatory frameworks that promote connectivity equity across regions.