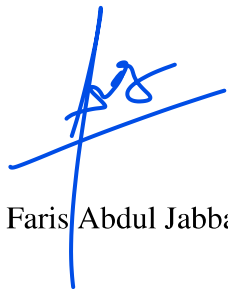


PREFACE

Alhamdulillah rabbil 'alamin, all praise to Allah, the most gracious and most merciful; through His mercy and guidance, the author has successfully completed this thesis with the title of **"Study on Spectrum Utilization Efficiency (SUE) of 1900 MHz for 5G-Railways: A Case Study of Indonesia"**. The author prepared this thesis to fulfill the graduation requirements for the Master's Program in Electrical-Telecommunication Engineering, with a specialization in Regulation and Management of Telecommunications (RMT), at the School of Electrical Engineering, Telkom University.

Some parts of this thesis also have been submitted to the IEEE International Conference on Computer Sciences, Engineering, and Technology Innovation 2024 (ICoCSETI) on November 7, 2024. Aware of the imperfections in this Master's thesis, the author acknowledges any limitations and apologizes for any oversights. Constructive feedback and suggestions from readers are welcomed to help address these limitations and improve the quality of the research. This thesis is intended to be a foundation for further refinement and to offer meaningful contributions to readers and to Indonesia, especially in supporting future advancements in telecommunications education and research.

Bandung, 17th February, 2025



Faris Abdul Jabbar