

PREFACE

All the gratitude author prayed to Allah who has given the author permission and strength to finish this thesis. Prayers and greetings to His Messenger, the prophet Muhammad SAW and his family and his companions.

Deep gratitude author conveys to Dr. Ir.Erna Sri Sugesti, M.Sc. and Istikmal, S.T, M.T, who has given all the attention and guidance to the author, so this thesis can be finished. And also deep thanks to Mr.Gelar Budiman, ST, MT who has patiently guided the author in resolving the MATLAB programming.

This thesis is original and unpublished by the author, Satria Utama. The hybrid scheme by of utilizing Link-Based and Subpath-Based method and selecting primary backup to generate a better performance scheme was originally designed by author. The term of *Initial Transmission Time (ITT)*, *Link-Based Redundancy (LBR)*, *Subpath-Based Redundancy (SBR)*, *Recovered Transmission Time (RTT)*, *Transmission Delay due to Restoration (TDR)* and *effectiveness* were originally defined by author. The signalling process was proposed by S. Ramamurthy and L. Sahasrabudde [3].

Bandung, July 2015

SATRIA UTAMA