## APPROVAL PAGE

Approval of the Graduate Study Program of Electro-Telecommunication Engineering, Telkom University

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Telecommunication Engineering.

26-08-2015

(Dr-.ing. Fiky Y. Suratman)

Head of The Graduate Study Program of Electro-Telecommunication Engineering

This is to certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Telecommunication Engineering.

26-08-2015

(Dr. Ir. Bambang Hidayat, DEA)

First Supervisor

hidral

(Prof. Dr. Ir. Sjafril Darana, SU)

Second Supervisor