## APPROVAL

Approval of the Graduate School of IT Telkom Date

(Ari Moesriami Barmawi, Ir., M.Sc., Ph.D.) Dean of Graduate School of IT Telkom

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

Date \_\_\_\_\_

(Arie Ardiyanti, S.T., M.T.) Head of Informatics 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 Informatics Engineering. Date

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