

### APPROVAL PAGE

Approval of the Graduate School of IT Telkom

Date (DD/MM/YY) \_\_\_\_\_

\_\_\_\_\_

(Ari Moesriami Barmawi, 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 Informatics/Telecommunication Engineering.

Date (DD/MM/YY) \_\_\_\_\_

\_\_\_\_\_

(Arie Ardiyanti Suryani, S.T., M.T.)

Head of Informatics/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 Informatics/Telecommunication Engineering. Date (DD/MM/YY) \_\_\_\_\_

\_\_\_\_\_

(Arie Ardiyanti Suryani, S.T., M.T)

Co-Supervisor

\_\_\_\_\_

(Jimmy Tirtawangsa, Ph.D)

Supervisor

Examining Committee Members (first name belongs to the chairperson of the jury and the second name belongs to supervisor, the rest is in alphabetical order of first name) Date of examination (DD/MM/YY) \_\_\_\_\_

(Ari Moesriami Barmawi, Ph.D) (Chairperson of the jury) \_\_\_\_\_

(Adiwijaya, S.Si., M.Si.) (jury's member) \_\_\_\_\_

(Kiki Maulana Adi, M.T.) (jury's member) \_\_\_\_\_