

### APPROVAL

Approval of the Graduate School of Telkom University

Date : \_\_\_\_\_

\_\_\_\_\_  
(Dr. Maman Abdurohman, MT)  
Dean of the School of Computing, Telkom University

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

Date : \_\_\_\_\_

\_\_\_\_\_  
(Dana Kusuma, Ph.D)  
Head of Graduate School 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 : \_\_\_\_\_




\_\_\_\_\_  
(Ari Moesriami Barmawi, Ph.D)  
Supervisor

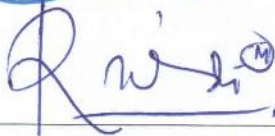
**Examining Committee Members :**

Date : June 13 2016

(Jimmy Tirtawangsa, Ph.D)  
(Chairperson of the jury)

: 

(Dr. Rinaldi Munir)  
(jury's member)

: 

(Dr. Putu Harry Gunawan, M.Sc.)  
(jury's member)

: 