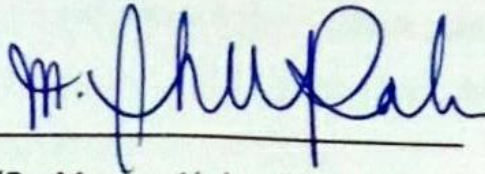


### APPROVAL

Approval of the Graduate School of Telkom University

Date: oct, 24<sup>th</sup> 2016

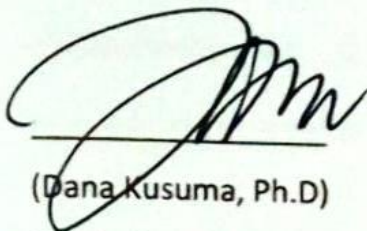


(Dr. Maman Abdurohman, ST., MT.)

Dean of Computing School of Telkom University

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

Date: 25-10-2016



(Dana Kusuma, Ph.D)

Head of Graduate School of Informatics Engineering

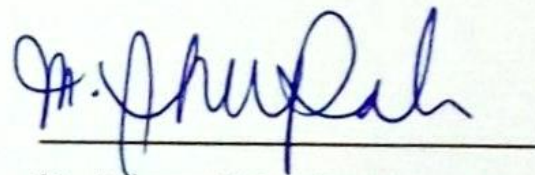
This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Informatics Engineering.

Date: 25-10-2016



(Fazmah Arif Yulianto, ST, MT.)

Co-Supervisor



(Dr. Maman Abdurohman, ST., MT.)

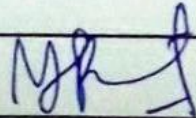
Supervisor

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