


### APPROVAL

Approval of the Graduate School of Telkom University


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

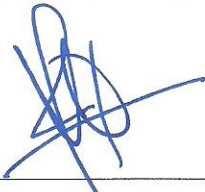
Date : 25 - 08 - 2017

  
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(Dana Sulisty Kusumo, 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 - 08 - 2017

  
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