TESTING OF THE CLTP (CONNECTIONLESS-MODE TRANSPORT PROTOCOL) IN ATN (AERONAUTICAL TELECOMUNICATION NETWORK)

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, not material which to a substantial extent has been accepted for the award of may other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

TESTING OF THE CLTP (CONNECTIONLESS-MODE TRANSPORT PROTOCOL) IN ATN (AERONAUTICAL TELECOMMUNICATION NETWORK)

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The purpose of this thesis is to perform software testing of CLTP functions based on white box and black box method. We conduct a test for the transmission and reception functions of a CLTP using white box testing, and generate several test cases for black box testing. White box testing means we know the source code. By that kind of definition, we analyze the internal code of CLTP by making a flowchart and flow graph for each function. We also calculate cyclomatic complexities to find the independent paths, and make connection matrixes. The result of the white box method is determined by the testing based on true and false condition. For black box testing, we generate some test case based on the ISO8602 specification. We make the test cases to test the length indicator, fixed part, parameter code of the destination, parameter length of the destination, parameter value of the destination, parameter code of the source, parameter length of the source, parameter value of the source, parameter code of the checksum, parameter length of the checksum, parameter value of the checksum, and the user data are successfully tested. We conclude that the `decompose_tpdu ()` can receive the packets.

DEDICATION

I dedicate this thesis to my Father in Heaven, my guidance for my life, my experience, my opportunity, and for his joyfulness that he gave to me.

Also dedicate this thesis to my beloved family, especially to my father, mother, and brother. Without their support the completion of this thesis would not have been possible.

Last but not least, I dedicate this thesis to my lovely country, Indonesia.

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