

## ABSTRACT

*Broadband data communications is a 3 credits required subject for all of college student in Telkom University Diploma Degree of telecommunication engineering department. Broadband data communication is very important subject because it learn about the process that occur when a tranceiver and receiver do a communications and learn about telecommunication basic. Broadband data communication is a theoritical subject, therefore an innovation will be required to improve students comprehension. The students needed is for reviewing again the subject to be learned beyond the scope of this course. Other than that, it need a learning modules which can implemented for helping theoritical comprehension which obtained during lectures, like a matlab or flash simulations.*

*From that situation, appear an idea to make an error and flow control simulator in broadband data communication subject which use matlab and flash. On classifying, matlab used for error control simulation and adobe flash cs6 for flow control simulation. Which required Stop and wait and slidding window flow control. With the availability of this simulation it can be used as an assist tools to improve students comprehensions about error control and flow control material on broadband data communication subject.*

*There is final result from error control and flow control. Performed calculation accuracy testing yields simulator values and manual values that have 100% equality accuracy on the sender and receiver. Having an understanding result of the exercise about error control before doing the simulator with the average value of 28.3 and after doing the simulator the average value 82.3. And the results of the analysis of the exercise of flow control before performing a simulator with an average value of 44.3 and after performing simulators the average value of 75.7. And functionality testing that works fine.*

**Keywords :** *Adobe Flash CS6, Error control, Flow Control, Matlab*