ABSTRACT

The rapid growth of the internet has both positive and negative impact on all users. Similarly, irregularities or oddities (Anomalies) that occur or in other words not as usual. Anomalies are also often referred to as unpredictable events so that something happens will vary from the usual events.

In this final project, simulation of Autonomous Response System (ARS) has been done with Beliefs-Desires-Intentions (BDI) concept on multi-agent system. Each ARS function that is in a multi-agent system coordinates where each agent has a different purpose but can still show each other its goals and knowledge.

The purpose of this study is to provide the value of the effectiveness of a function of Belief revision (classification function) or IDS Value. IDS Value is calculated based on the comparison between Cost action and actual Loss (C / L) incidence as well as percentage, False Positive Alarm, and accuracy.

In this Final Project research resulted in a multi-agent system in which there are several data agents to perform the process of data grouping and labeling, some detection agents to perform anomaly and classification detection until the calculation of the effectiveness of an anomaly classification function using IDS Value calculation. The average value of IDS Value for C / L = 0.7 is 0.53, and the average value of IDS Value for C / L = 0.9 is 0.78.

Keyword: multi-agent, BDI, IDS, Value, simulation.