ABSTRACT

Ensuring the security and privacy is one of the highest priorities in Wireless Sensor Network because the data collected by the sensor nodes are commonly is a confidential data. There is a software or device that can detect suspicious activity in a wireless network, the Wireless Intrusion Detection System (WIDS). However, from the many different approaches of WIDS there is no method has been able to completely be spared from fault such as false negative or false positive.

The mechanism of the web spider defense techniques will be applied to the development of workflow for IDS with the aim of reducing the false negative. The implementation in real systems is to provide delay for each incoming packet. Methods of testing for this final task was done by doing penetration test and calculation of false negative. While the calculation of false negative percentage show that by adding the delay time, the percentage of false negative has decreased but then increasing again. The most ideal delay time is approximately 500 ms with the percentage of false negative rate was reduced to 66.37%.

Keywords : *false negative, Wireless Intrusion Detection System* (WIDS), *security system, web spider defense technique*, *Wireless Sensor Network* (WSN).