

ABSTRACT

In network management, especially wireless sensor network required a routing method that can help the process of sending packages to the destination with the shortest path and minimum cost because Wireless Sensor Network has a large number of sensor nodes. However, per-package routing lines often get problematic links such as packet stacking on certain nodes or there are dead sensor nodes that cause the path to be reconstructed, causing package delivery to have constraints when a wireless sensor network has a large number of sensors. On this issue, the working principle of Compressive Sensing can be implemented to reconstruct the path with accurate reconstruction so that it can help the performance of the routing algorithm. In the current research, a combination of Compressive Sensing Path Reconstruction (CSPR) method for sending and recording lines on Wireless Sensor Network as has been done[1] with LASSO as the method used to reconstruct the path on the system model. This research aims to design and simulate a path reconstruction technique model on wireless sensor network by applying reconstruction algorithm that exist in compressive sensing technique. LASSO can reconstruct the path that has been done simulation of link disconnection on several paths that have been selected. Lambda as the parameter used to obtain the optimum solution. When the lambda used is too small then the level of accuracy in the reconstruction process becomes inaccurate, when the lamda used is too large then the error obtained is also large.

Keywords: *Compressive Sensing, Wireless Sensor Network, Path Reconstruction*