Abstract

On the work of this final project, a study done of the Modbus TCP protocol apply to the smart building networks using wireless and wired transmission media. Modbus TCP has the advantages of simple and small data packets. This protocol will be applied to the sensor side by side gateway app. Analysis parameters are round trip time delay, packet loss, and protocol overhead. To simulate the amount of sensor data , it will be used a simulator to generate the data Modbus slave which will be sent simultaneously. The results obtained value of the round trip time delay for all media data transfer for less than 2 seconds. , The value of protocol overhead of 77 %, and 0 % packet loss value. The amount of data generated sensor is 10, 100 and 1000. This value is used to represent the amount of sensor data in smart building.

Keywords: Modbus TCP, Smart Building, OpenMTC, round trip time delay, packet loss, protocol overhead