The days are coming where wired communications are getting converted to wireless communication and it’s getting popular. We use different sensors in wireless communication which are making our lives easy and comfortable. WSN is one of the buzzing thing in our modern life.

WSN is an interconnected sensor node that communicate wirelessly to collect data about the surrounding environment. Although it makes our life easy, it also has some demerits. As the sensors need to be activated continuously to collect data from the environment, it consumes much power. Another thing is that the sensors work wirelessly so there comes some security issues such as someone might try hacking and pass wrong data or sabotage the sensors. As it completely wireless, there are some effects from the surrounding environments to the network connection.

To solve this kind of problems, nowadays we have so many network communication protocols like RFID, ZigBee, RuBee, WireBee, Z-Wave.

I prefer ZigBee because it’ power consumption is much lower than other network communication protocols. Connection stability is pretty strong. Settings and setups are easy too. Security is also worth mentioning.

There are some lacking too such as smaller range, low data transfer rate and device replacing is costly.

Since our environment is small so Zigbee’s range limit would satisfy to set up WSN’s network. As the sensors will send small sized data so the data transmission rate will not have an effect. Therefore, for small sensor environments, ZigBee is one of the best.

In the report I will analyze two metrics – data transmission rate and packet loss. I will use cooja as a simulator.

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