Simulator utilization

The Simulator is made in JAVA programming language, you run it directly by the default simulation scenario. You can also modify the simulation scenarios by using Eclipse or NetBeans IDE to modify the source code of the simulator.

The Main class and file of the simulator is simulatiom.java. The main method contains the selected method to simulate the zigbee frame adaption according to different approaches: association_depth_Energy_Trust_Node (our approach), association_depth_CSB, and association_depth_ADCA

In the main you can specify which simulation you need to perform, for example:

```
1  public static void main(String[] args) {
2    Simulations S= new Simulations();
3    S.Sim4_Energy_conception_withFire_withFramePeriods(
4                    association_depth_Energy_Trust_Node ,
5                    25,25,
6                    3600*24*300,
7                    3600,
8                    S.PacketTime, S.AckTime, S.Retransmission);
9  }
```

The line 3 is to call the method *Sim4_Energy_conception_withFire_withFramePeriods* to simulate the zigbee network by using a default model of fire spread and making frame period adaptation. The line 4 is to select one of the approaches. The line 5 is for the sensor grids. In this case a grid of 25x25 (25 rows, 25 colons) so 625 sensor nodes. The line 6 is the time in seconds of the simulation. It is about 300 days. The line 7 is the period of frame and association updates by running the procedure of the approaches. It is about 1 hour. Line 8 is for the packet time, ack time and the average of retransmission relative the transmission reliability. We select these values by default.

If we want to run the association_depth_CSB or association_depth_ADCA , we need only to change the line 4.

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