Internet of Things - Home Challenge 2

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Matteo Falconi
Codice Persona: 10568259
Matricola: 945222

Davide Fiozzi
Codice Persona: 10535048
Matricola: 945107

Repository:
https://github.com/TheFalco/IoT_HW1_Falconi_Fiozzi/tree/master/HomeChallenge2

The challenge was met by developing a system of 2 motes, communicating with each other via radio messages. In this document are reported the assumptions made on the requests for the delivery.

Assumptions:

- "**Mote #1 sends periodic request (REQ) messages to mote #2**":

  In order to control the requests, Mote #1 sends the request to Mote #2 only if it doesn't receive the ACK of the REQ message.

For the sake of completeness, we decided to turn off the radio modules of the two motes right before the end of the simulation.

Mote #1's module is shut down when it receives the response from Mote #2:

```
//Received a response (RESP)
dbg("radio_rec", "Response received. Value of the sensor = %hhu\n", rcm->value);
call Timer1.startOneShot(1);
```

This functionality has been implemented using a one shot Timer. Once the response is received, Timer1 fires after 1 millisecond. Here the implementation of its "fired" event:

```
event void Timer1.fired() {
    dbg("role", "Ending operations on mote %d... \n", TOS_NODE_ID);
    call SplitControl.stop();
}
```

Mote #2's module is shut down after receiving the ACK of the RESP message:

```
dbg_clear("radio_ack", "\t\tCounter of the received message: %hhu\n", rcm->msg_counter);
if(rcm->msg_type == RESP){
    call SplitControl.stop();
}
```