

Project: Keep your distance

You are requested to design and implement a software prototype for a social distancing application using TinyOS and Node-Red and test it with Cooja. The application is meant to understand and alert you when two people (motes) are close to each other. The operation of the software is as follow:

- Each mote broadcasts its presence every 500ms with a message containing the ID number.
- When a mote is in the proximity area of another mote and receives 10 consecutive messages from that mote, it triggers an alarm. Such alarm contains the ID number of the two motes. It is shown in Cooja and forwarded to Node-Red via socket (a different one for each mote).
- Upon the reception of the alert, Node-red sends a notification through IFTTT¹ to your mobile phone.

Use at least 5 motes. Start the simulation with all the mote far away from each other and move them with the mouse testing different configurations.

¹ IFTTT is a service to create conditional statements. It can be easily integrated with Node-Red, and it's an easy way to send notifications to your smartphone. This is a useful reference: https://wiki.instar.com/Advanced_User/Node-RED_and_IFTTT/, but don't be afraid to discover it by yourself. It's very easy and enjoyable.