



Politecnico di Milano

Advanced **N**etwork **T**echnologies **Lab**oratory



Challenge

Home challenge #3: TinyOS



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- Create a Cooja simulation with three TinyOS (sky) motes, called 1, 2 and 3.
- The three motes communicate over the radio. The message is composed by a **counter** and the **sender id**. All the messages are sent in BROADCAST.
- Messages are sent at:
 - 1 Hz for mote 1
 - 3 Hz for mote 2
 - 5 Hz for mote 3



Home Challenge #3

- Turn on/off the LEDs according the following rules:
 - Messages sent by mote 1 toggle led0
 - Messages sent by mote 2 toggle led1
 - Messages sent by mote 3 toggle led2

 - Messages received with 'counter mod 10' == 0 turn off all the LEDs
- The counter is incremented after a new message is received.



Hints



1. Start from a clean folder with clean files
2. Create the message structure
3. Identify the interfaces to use
4. Wire the interfaces in the AppC.nc file
5. Write the logic in the C.nc file

- ☐ Use RadioCountsToLed as reference
- ☐ The mote number is in the constant TOS_NODE_ID
- ☐ Compile often the code checking if all the interfaces are okay