ITF 2017 DEMO PROPOSAL

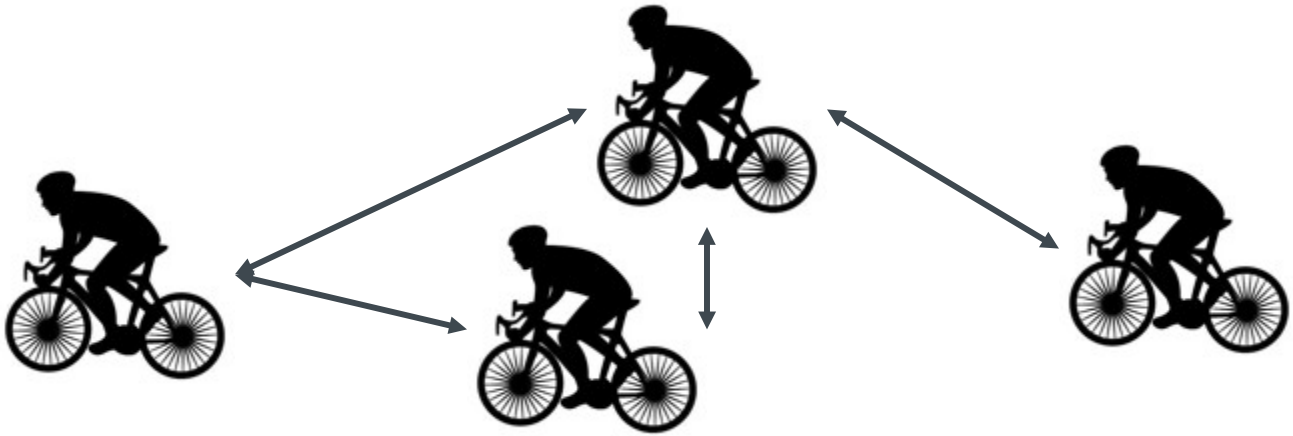
CONTINUOUS ATHLETE MONITORING

RELATION TO EXISTING IMEC PROJECTS

- IMEC.ICON CONAMO project
  - Initial demonstrator
  - https://www.iminds.be/en/projects/conamo
  - Monitoring data gathered through ANT+ (2.4 GHz)
  - Multi hop data transmission through IEEE 802.15.4g (868 MHz)
  - Optimized scheduling and low-delay RPL routes
- High Impact Initiative (HI2) CoDeNeT
  - AppDaptive track demonstrator

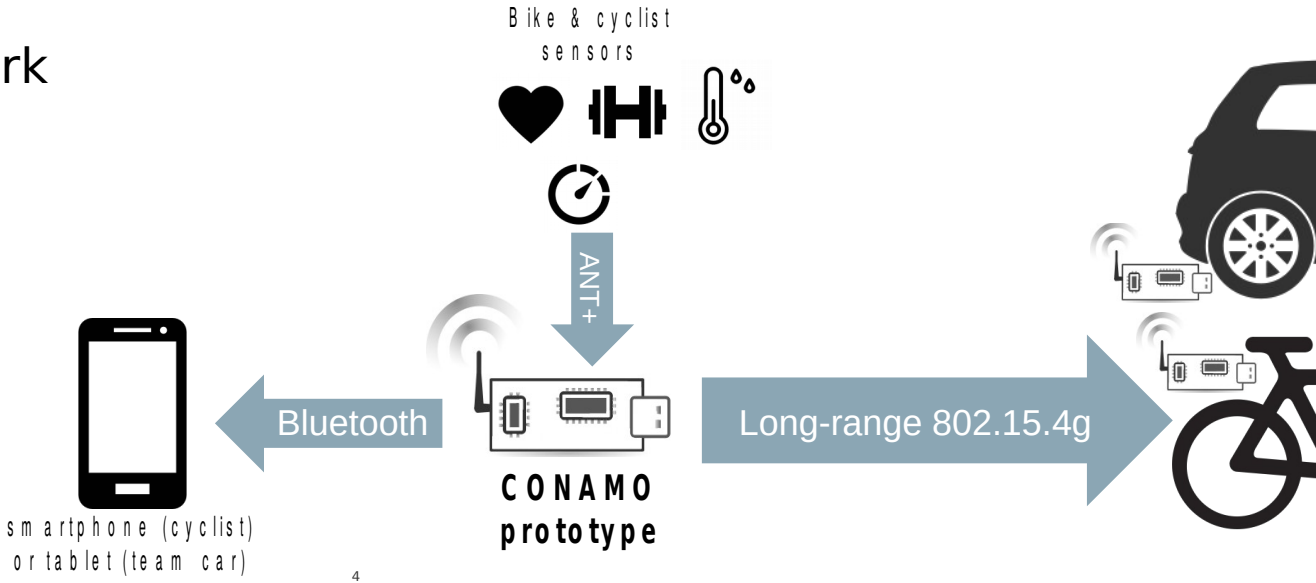
PROFESSIONAL AND AMATEUR CYCLING EVENTS

- Event monitoring requirements:
  - Scalability
  - Reliability
  - Low power consumption
  - Low latency
- Scenarios:
  - High dense mobile networks
  - Non 3G/4G coverage



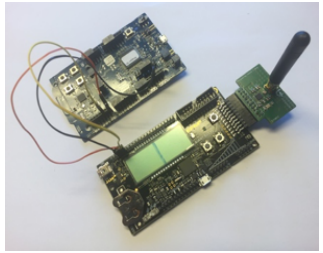
LONG RANGE SENSOR COMMUNICATION

- Proposed architecture:
  - Sensor Data gathering
  - Long range retransmision
  - Multihop network



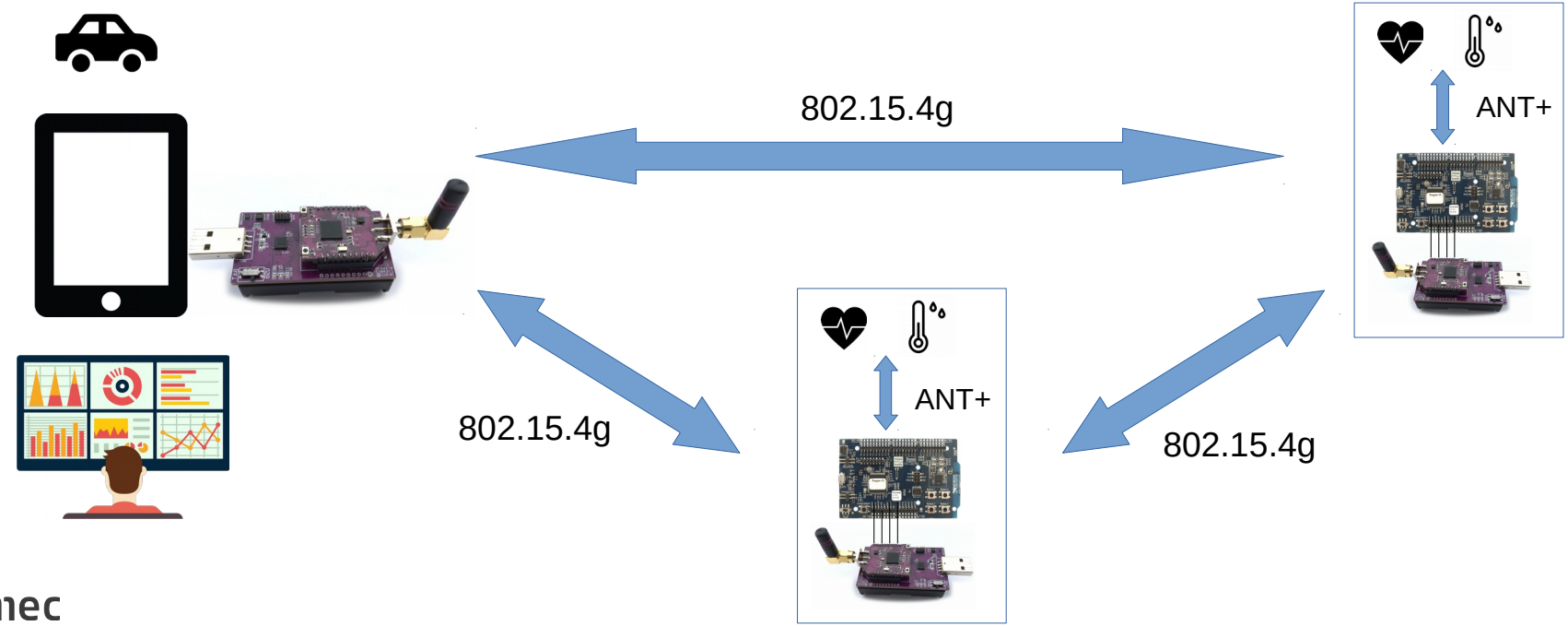
PREVIOUS RESEARCH

- Initial field tests with Lotto-Soudal
- First CONAMO protoype



CONAMO ITF DEMO

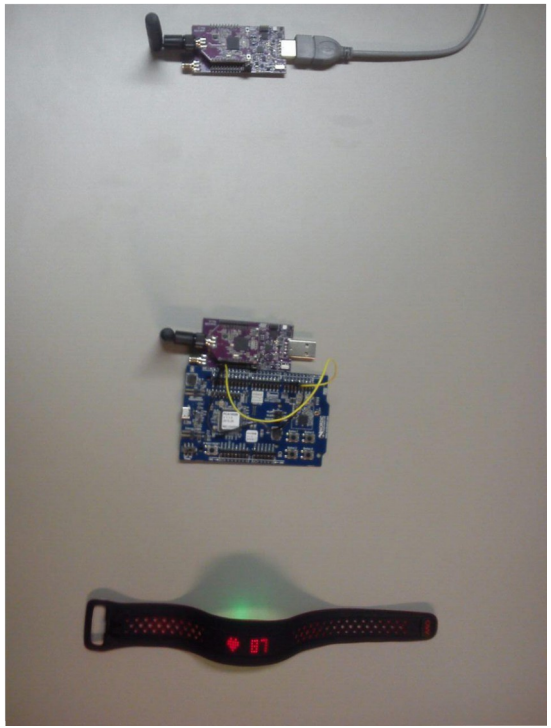
- Sensor data gathering: ANT+
- Long range: 802.15.4g with TSCH



CONAMO ITF DEMO

TO BE INTEGRATED BY EARLY JANUARY 2017

- Monitoring side
  - 802.15.4g node
  - Laptop/Tablet
- Athlete side
  - 802.15.4.g node
  - ANT+ node
  - Heart Rate sensor
  - Bicycle



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