Synchronization Layer: an Implementation Method for Energy Efficient Sensor Stack

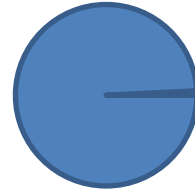http://tools.ietf.org/id/draft-cao-lwig-syn-layer-00.txt

Cao, Zhen (cz), editor

China Mobile

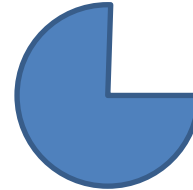The IDEA is from the paper:

Dunkels, A., "The Announcement Layer: Beacon Coordination for the Sensornet Stack. In Proceedings of EWSN 2011".

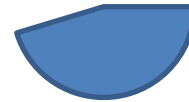# Different Power Consumption Modes

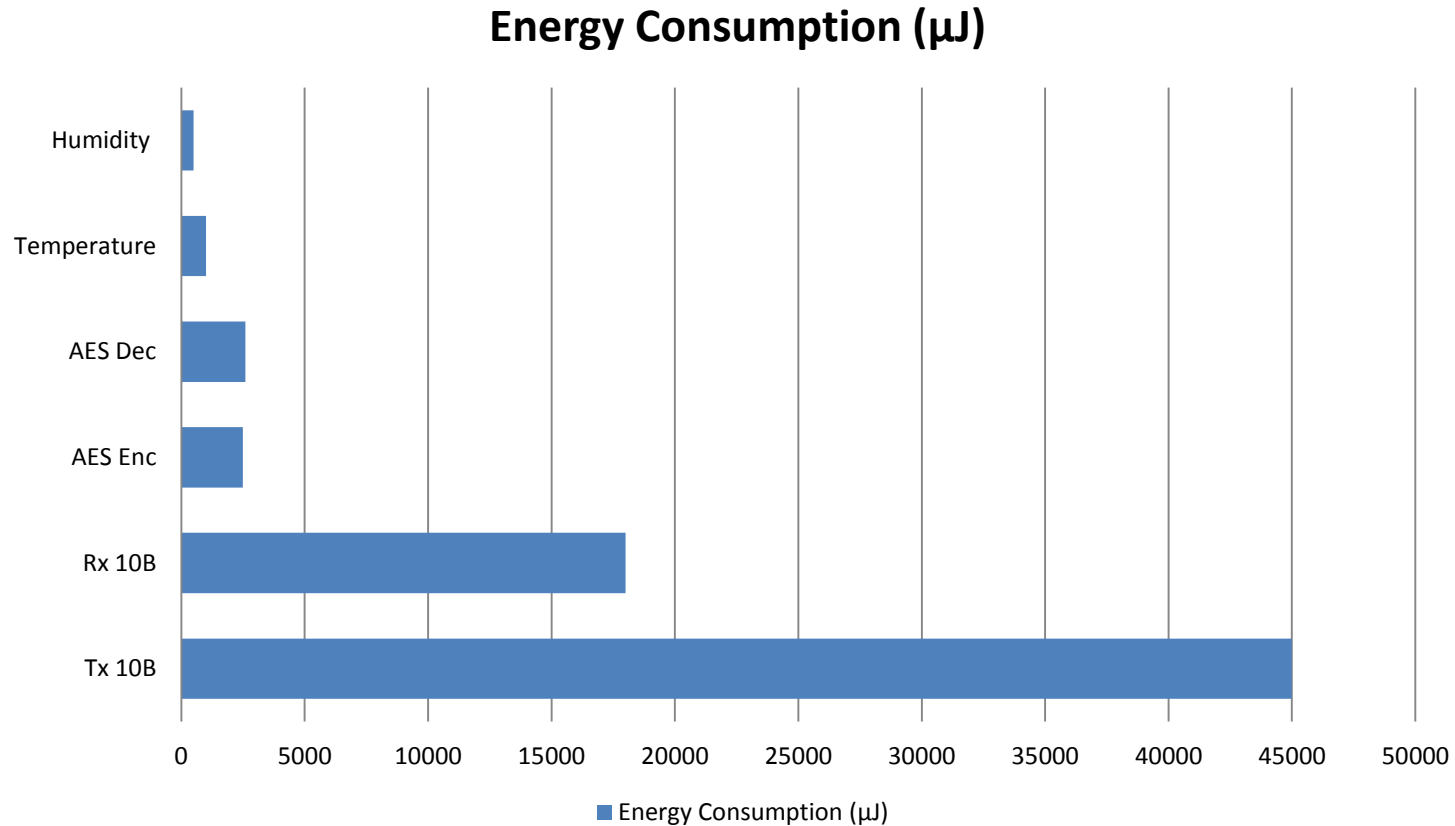- Transmit Mode:

- Receive Mode:

- Idle Mode:
  - Listen to wireless and switch to Tx or Rx on demand

- Sleep Mode:
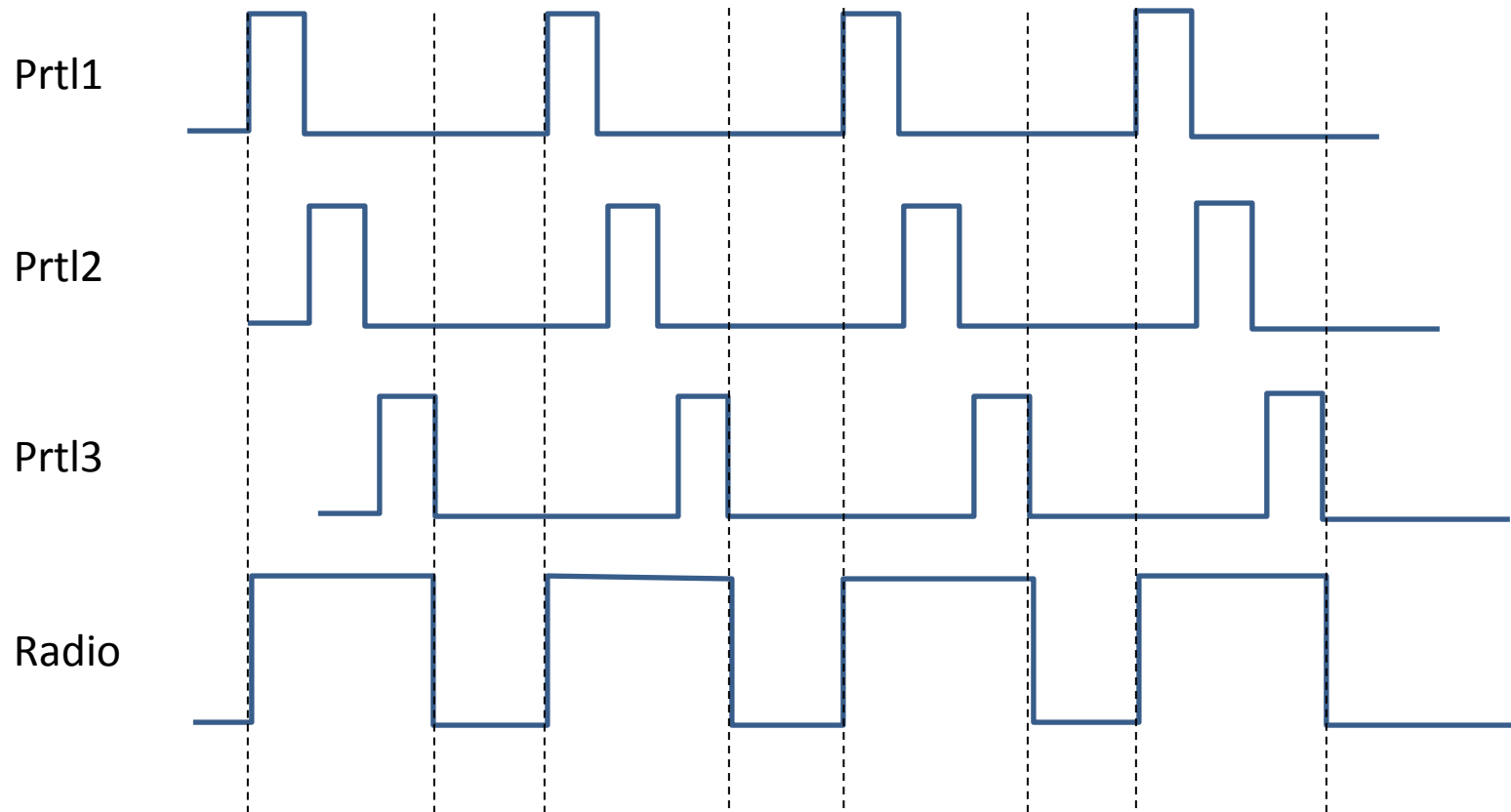 - very low power consumption

Sleeping saves energy

Energy Consumption (μJ)

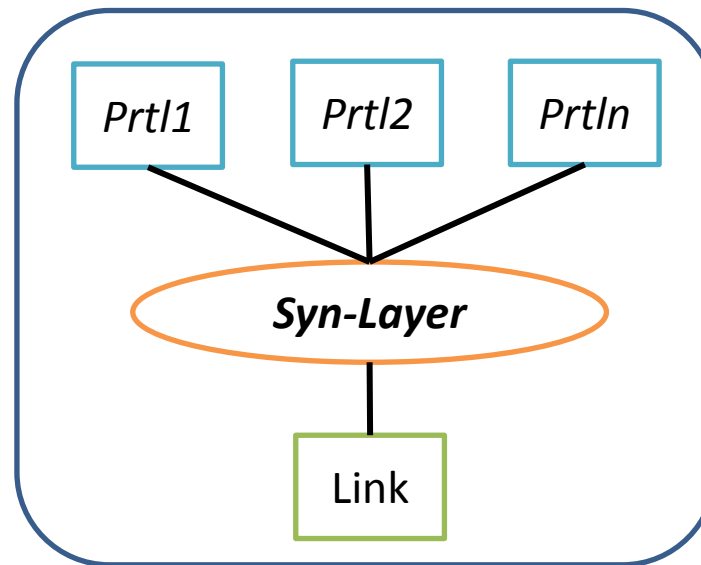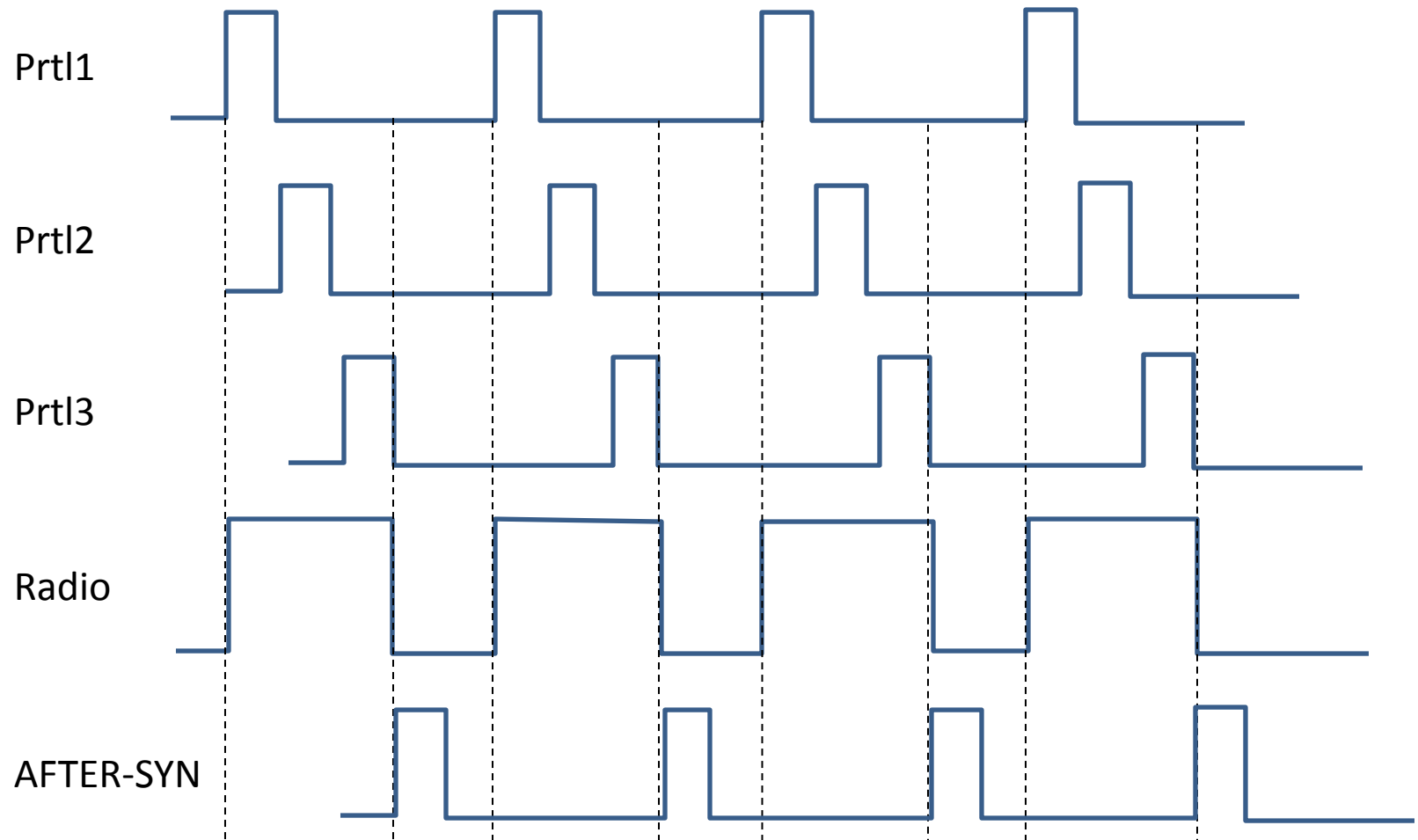- Most efficient way is to keep the sensor sleeping when applicable

The Problem

- Different APP protocols triggers the Radio on at different frequency
- Radio turns to be always on, especially in a beacon flooding environment

The IDEA

- Just to synchronize them, keep on frequency at the Synchronize layer

The Effect

Prtl1

Prtl2

Prtl3

Radio

AFTER-SYN

The EFFECT

BEFORE: Yawn

NOW: Sleeping

Questions and Comments ?