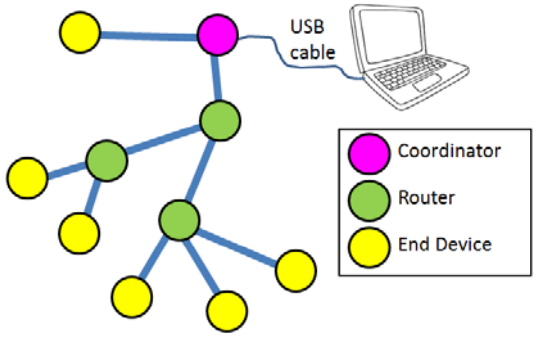


Figure 1. *Topology tree.*

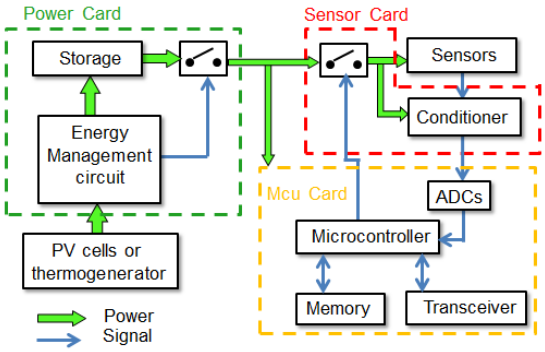


Figure 2. *Generic structure of an ED node.*

The **Mcu Card** is composed of a JN5148 module which is powered through a LDO Regulator TPS78227 (V_{out}=2.7V), which efficiency is greatly better than the TPS73633 previously used. The **Power Card** includes a secondary Li-Ion Coin Cell Battery - LIR2450 3.6V 120mAh and may incorporate a BQ25504 CI which harvests and manages energy from PV cells or from a thermogenerator.

A load switch (TPS2101) offers the ability to disconnect the battery and the load in order to protect the battery against deep discharge.

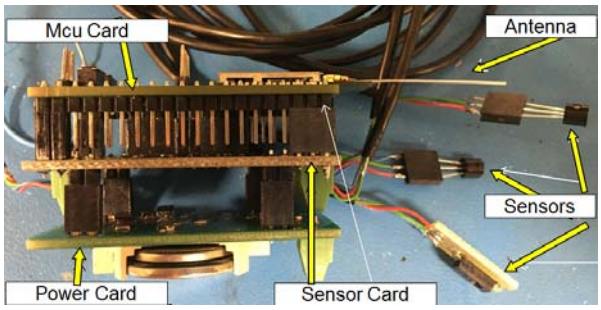


Figure 3. *Assembled End Device.*

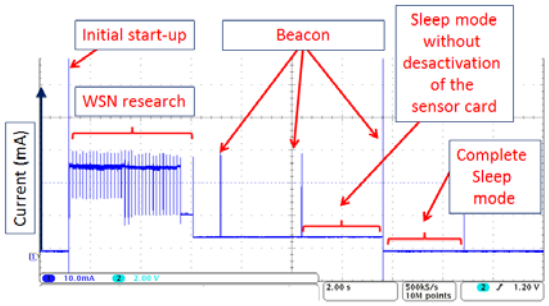


Figure 4. *Current furnished to ED during start-up.*

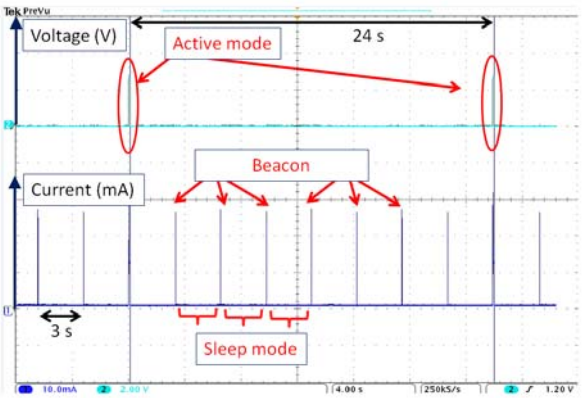


Figure 5. *(up) Sensor card supply voltage, (down) Battery current.*

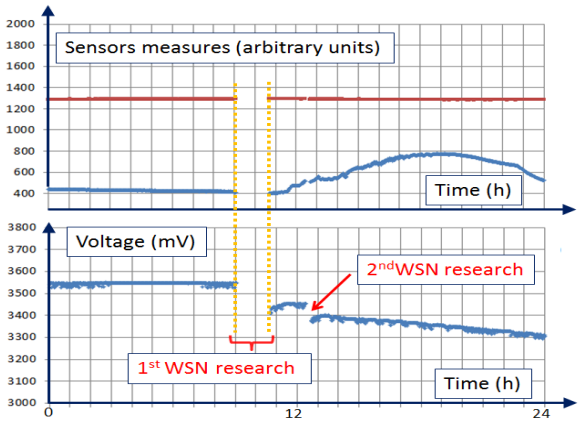
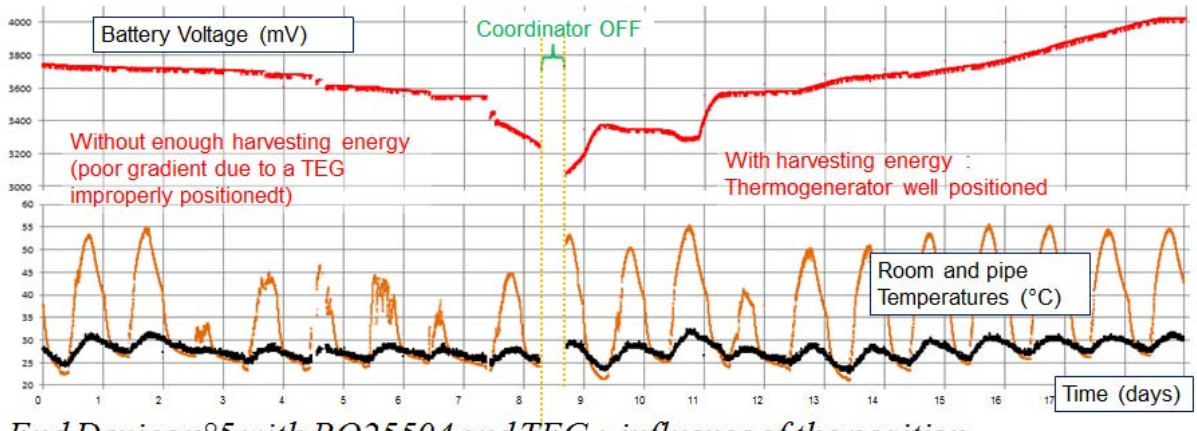


Figure 6. *(up) Measurements performed by ED, (down) Battery voltage.*



End Device n°5 with BQ25504 and TEG : influence of the position of the TEG and effect of a loss of communication