



QUALILIFE : A HIGH PERFORMANCE MULTI-SIGNAL DATA ACQUISITION SYSTEM

Environmental Big Data - From Acquisition to Exploitation

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Qualilife : a high performance multi-signal
data acquisition system

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The logo for IM2NP, featuring the text 'Im2np' in a blue, handwritten-style font.The logo for LSIS, featuring a stylized red and blue graphic of a globe or network structure to the left of the text 'LSIS' in blue and red.The logo for iutG eii TOULON, featuring the text 'iutG eii' in blue and black, with 'TOULON' in black below it.The logo for UNIVERSITÉ DE TOULON, featuring a blue square with a white sunburst pattern to the left of the text 'UNIVERSITÉ DE TOULON' in blue.The logo for SMIoT, featuring a network diagram of nodes and lines above the text 'SMIoT' in green, with 'Scientific Microsystems for Internet of Things' in smaller text below.

Qualilife Sound : experimental results and applications

- An example of application : environmental data logging in real conditions
 - Sperm whales monitoring in indian ocean
 - François Sarano expedition : Mars 2017



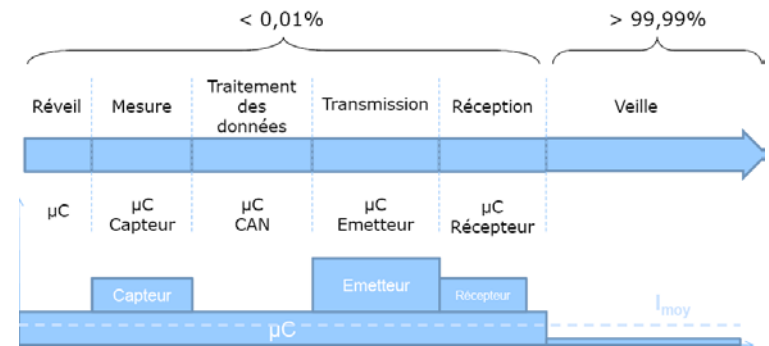
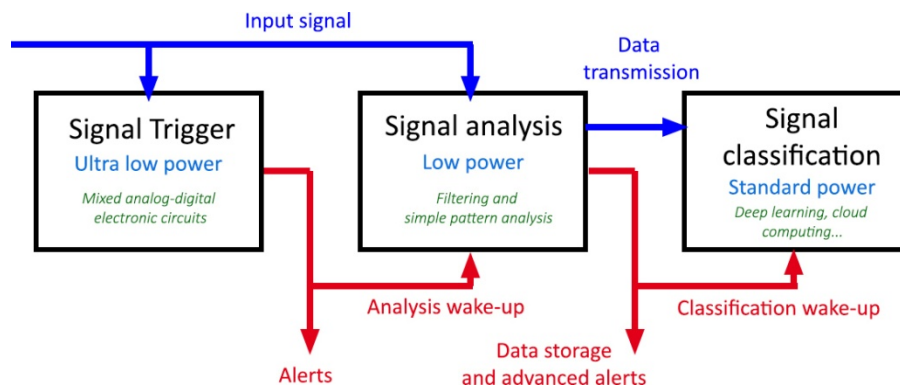
Qualilife : future works

- Reducing power consumption in embedded environmental systems
 - ▣ Too much useless data storage.
 - Costs a lot of money in embedded data storage
 - Needs to be often emptied
 - ▣ Too much energy consumption in embedded devices.
 - Too short recording periods.
 - Need for long life expensive batteries.
- Generating real time alerts :
 - ▣ Necessary for human interventions
 - ▣ Requires :
 - Reliable alerts generators
 - Reliable wireless long range low data rate transmissions



Qualilife : future works

- A proposal : introducing a low to higher power signal analysis chain in Qualilife system :
 - ▣ Objective : having the power consuming parts of the data logger in sleep mode most of the time.
 - ▣ ➡ A need for low power signal triggers : PhD. Manon Fourniol



Qualilife : future works

- QUALILIFE joint protocol experiments
 - ▣ Coupling daughter boards together with joint protocols :
 - Acoustic and movement : ex. bees experiments
 - Acoustic and light measurement : impact of light pollution on animals behaviors.
 - Acoustic and chemical pollution : impact of everyday indoor and outdoor pollution on the real estate prices.
 - ▣ Other ideas are welcome :
 - SMloT will be glad to cooperate with you !

Questions ?

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