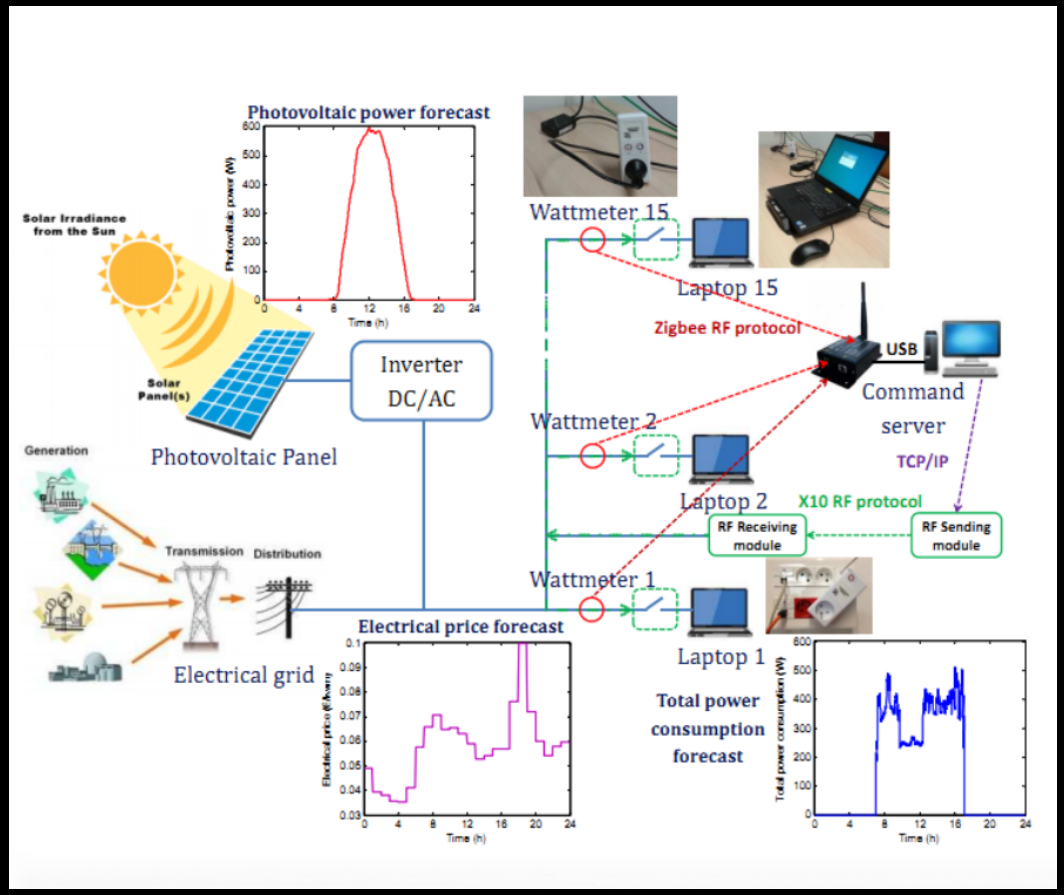
Power Management of Laptop Batteries in Dynamic Heterogeneous Environment Using iPOPO

Shadi Abras[1,2,3], Thomas Calmant[3], Benoit Delinchant[1], Stéphane Ploix[2], Frédéric Wurtz[1], Mahendra Singh[1,2]

1 : Univ. Grenoble Alpes, G2Elab
2 : G-SCOP
3 : LIG France

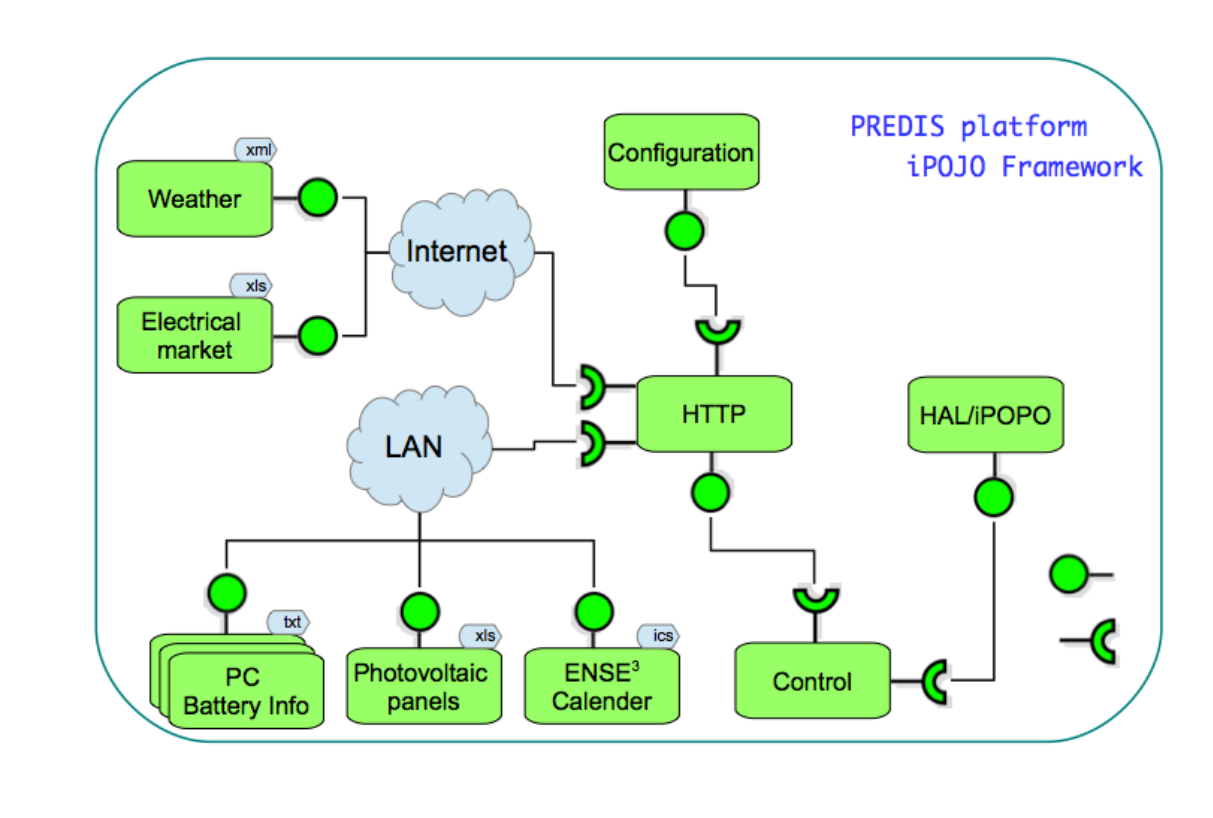
Problematic



Implementation of an algorithm for controlling the supply of laptops for proactive energy management with following objectives

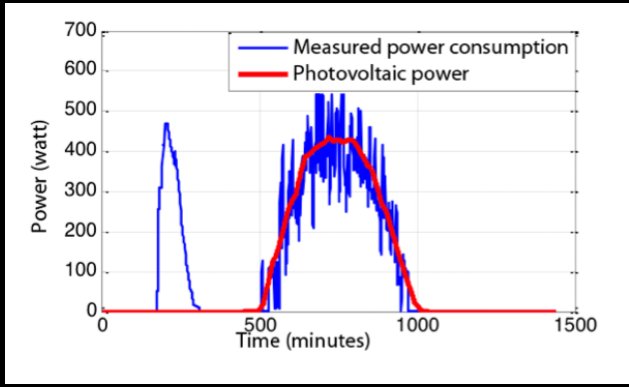
- Minimizing the power purchase form the Grid by considering the anticipated energy use from the prediction models.
- Using the locally produced electricity from the photovoltaic panel.
- Realization of plug and play architecture for new hardware and software.

Experiment

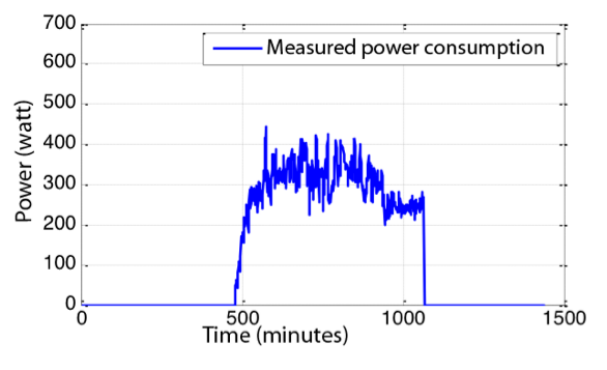


Structure of energy management system for laptop Batteries in PREDIS/MHI

Results



With the management system



Without the management system

	Cost per month(euro)	Rate
With Management	0.5	1
Without Management	2.6	5.2

Comparison of both strategy

Thanks