



THEMIS

Genesis of a Building Operating System – BOS

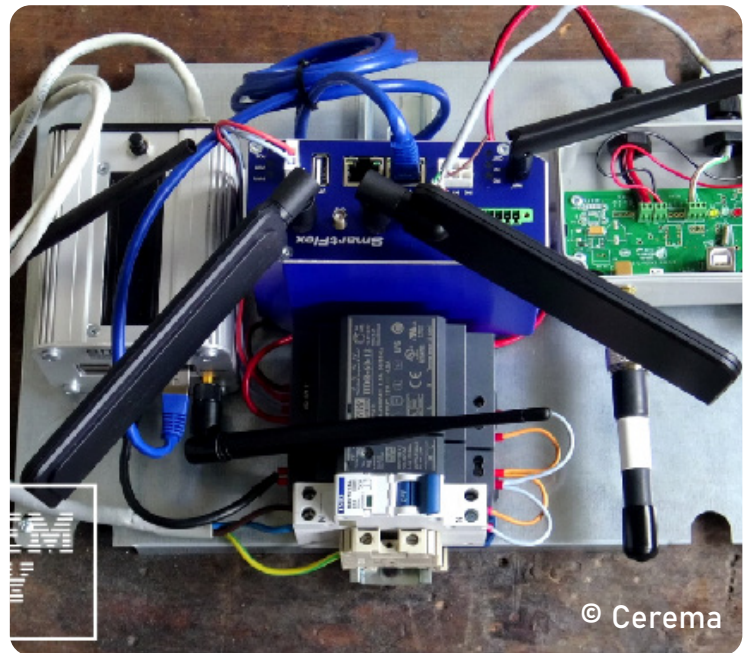
Cerema's Clermont-Ferrand-based lab has designed a real-time instrumentation device that analyses the “energy behaviour” of buildings to optimise their consumption. It uses a number of open source technologies and is known as THEMIS (Thermic and Energetic Monitoring System). THEMIS is being developed as part of an experimental study conducted by Cerema on behalf of the social landlord, Allier Habitat.

Carnot Clim'adapt Institute

Scientific / technological breakthrough

THEMIS seeks to boost interoperability between systems, focusing on monitoring and managing building energy performance – both major concerns for Carnot Clim'adapt Institute. THEMIS is really useful for data scientists tackling difficulties in aggregating data from very different sources.

With its own on-board chronological database, a weather forecast module and physical and/or statistical modelling algorithms, THEMIS is totally interfaced with the latest numerical calculators, notably Python.



Competitive advantage for the economic stakeholders

At a time when digital data is becoming a “fluid” just like electricity, water or energy, THEMIS provides an ideal platform for a building operating system, drawing on the architecture and design that made the Internet such a success. Under this completely decentralised, innovative approach, THEMIS devices are autonomous connected objects with their own intelligence. When put to work as a network, they can exchange data with each other without any need for cloud storage.