

EUREKA PROJECT

CATRENE HERTZ



HOME ENERGY SAVING SYSTEM SOON TO HIT THE MARKET

Energy efficiency is key to attain several objectives: win our fight against climate change is one but cutting the energy bill effortlessly from the comfort of your couch is also an important source of motivation.

While smart thermostat are to be all the rage this winter among tech gadgets aficionados, the energy efficiency of households is still largely hampered by lights or other appliances being needlessly left on when not in use. However, the CATRENE HERTZ European research project has developed a user-centred system that will create dramatic energy savings without the need for human intervention.

Philips lighting division and corporate research laboratory took the project's lead, partnering with prominent European companies from Austria, Spain and Netherlands. Recognising the need for an automated control system allowing true power efficiency, the project's goal was to create a harmonised wireless network connecting home appliances and equipment through sensors: an intelligent, inbuilt platform that could independently manage energy-saving programmes.

HERTZ's innovative approach has resulted in the development of several new applications, part of a power adjustment system that reduces energy consumption by 27%. Not yet named, the product will also be easy to install without the help of

a professional and affordable, thanks to its low-cost components.

True energy efficiency

When developing the new product, the HERTZ team identified two fundamental challenges: the system had to help save more energy than it consumed and compatible with a variety of domestic devices.

"The Catch-22 that an energy saving system consumes more energy than it saves was solved by providing low-power versions of all the different components of the system," explains HERTZ project

“ **HERTZ's goal was to create a wireless inbuilt system that could independently manage energy-saving programmes.**

leader Henk Schepers, Manager controls solutions at Philips. One of the main achievements of the three-year project was for example the creation of an energy-efficient sensor allowing a human presence to be detected in a room, even when the subject is not moving.

"Philips was in the lead to develop the ultra-reliable, low power presence sensor," Schepers tells us. The wireless part of the system itself works on very low energy. Mainly thanks to the work of

project partner Infineon, it is now 90% more energy-efficient than the average wireless local network.

"The islands of incompatible, proprietary technologies were bridged by the definition of a common interface," says Schepers. HERTZ created a gateway to facilitate the wireless interaction of different devices, allowing them to signal their status via the network: Quintor, a leader in the field of software and mobile development, defined the common interface language, while Dialog, a smartphone and tablet's electronics specialist, developed the ultra-low energy standard for wireless communications." The standard called DECT ULE, for Digital Enhanced Cordless Telecommunications Ultra Low Energy, was developed in the first time in its commercial version by Dialog.

Different other elements of a personal energy saving package were developed by the partners: Philips took care of the components specific to lighting, building up on another CATRENE project – Solutions for Energy Efficient Lighting (SEEL). And last but not least, Iquadrat, an online marketing expert, made several optimisations to the wireless system to make it more user friendly.

This international research project funded thanks to the European EUREKA initiative has set a new standard for the home energy-control market, overcoming important obstacles to achieving true energy efficiency.

COUNTRIES INVOLVED

Austria, Spain, The Netherlands

DURATION

36 months

BUDGET

€ 11.2 M

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EUREKA is a European network for market-oriented R&D.

