



ASTRAL Energy-Saving System

Background

With global energy consumption and energy prices both predicted to rise for the foreseeable future, the pressure increases for organisations to maximise the efficiency of their available resources. As a result, systems to help reduce the amount of wasted energy are required.

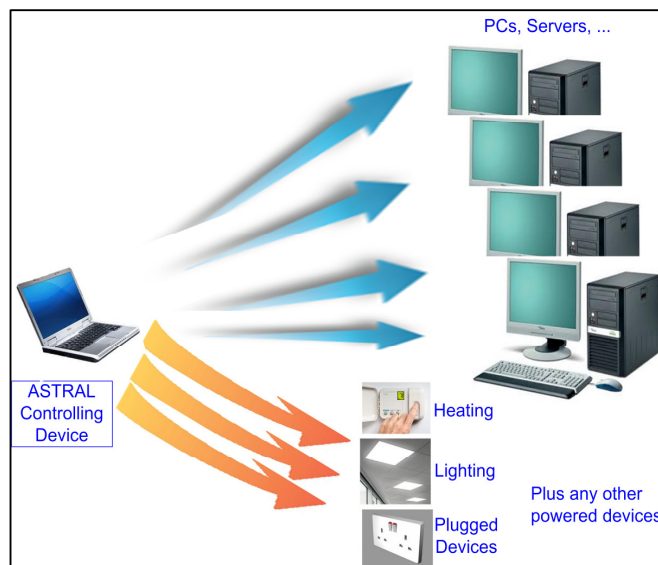
The ASTRAL system safely and securely manages power to distributed devices based on policies defined by the user. This work originated in over 5 years of R&D by the TSSG research centre in WIT into the area of Autonomics Management Systems.

Technology Description

The ASTRAL system measures the energy usage of all devices in a building; and controls the power to these devices, based on the policies defined by the building administrator. The policies can be either time- or event-driven. The ASTRAL system also provides graphs of the energy consumed by each user device over a user-defined time period.

An example of a very simple policy that could be set up in ASTRAL by the user, for the case of an office building:

Five minutes after an employee leaves their desk, the ASTRAL system will cleanly put their PC into a low power mode and switch off all other desk devices, including Power-over-Ethernet to the desk. Five minutes after everyone in one office area has left, ASTRAL will turn off heating and lighting in that area.



ASTRAL policies can interface with building management systems, position sensors, card-swipe systems, alternate energy supply systems, etc.

ASTRAL consists of

- A central hub to collect the energy consumption from all powered devices. This data is trended and graphed to meet the user needs. The central hub also allows the administrator to enter policies.
- A non-invasive h/w component to measure and control power to each device.
- A small app. for PCs/servers to ensure that all data is saved before turning off.





Market Opportunity

The increase in the cost of energy and the environmental impacts of energy usage is driving the market for energy savings devices. The cost and environmental impact of the waste from PCs has been extensively examined (a US\$2.8b market in the US alone).

In 2003 (the last year for which data was published by the US Energy Information Administration), Computers represented only 5% of the energy needs of buildings. The remaining 95% consisted of Lighting (38%), Cooling (13%), Ventilation (12%) and others. Thus the market for a holistic approach to building energy savings is in the tens of billions.

ASTRAL is a flexible policy-based energy management system which turns off individual devices when they are not being used.

IP Status

All of the IP of the project is owned in-house by WIT. The project IP has already been protected and this IP will form part of any proposed license deal. Patents related to the ASTRAL system are currently being investigated.

Contact

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