Kernel driver power_meter

This driver talks to ACPI 4.0 power meters.

Supported systems:
  * Any recent system with ACPI 4.0.
    Prefix: 'power_meter'
    Datasheet: http://acpi.info/, section 10.4.

Author: Darrick J. Wong

Description

This driver implements sensor reading support for the power meters exposed in the ACPI 4.0 spec (Chapter 10.4). These devices have a simple set of features--a power meter that returns average power use over a configurable interval, an optional capping mechanism, and a couple of trip points. The sysfs interface conforms with the specification outlined in the "Power" section of Documentation/hwmon/sysfs-interface.

Special Features

The power[1-*]_is_battery knob indicates if the power supply is a battery. Both power[1-*]_average_{min,max} must be set before the trip points will work. When both of them are set, an ACPI event will be broadcast on the ACPI netlink socket and a poll notification will be sent to the appropriate power[1-*]_average sysfs file.

The power[1-*]_{model_number, serial_number, oem_info} fields display arbitrary strings that ACPI provides with the meter. The measures/ directory contains symlinks to the devices that this meter measures.

Some computers have the ability to enforce a power cap in hardware. If this is the case, the power[1-*]_cap and related sysfs files will appear. When the average power consumption exceeds the cap, an ACPI event will be broadcast on the netlink event socket and a poll notification will be sent to the appropriate power[1-*]_alarm file to indicate that capping has begun, and the hardware has taken action to reduce power consumption. Most likely this will result in reduced performance.

There are a few other ACPI notifications that can be sent by the firmware. In all cases the ACPI event will be broadcast on the ACPI netlink event socket as well as sent as a poll notification to a sysfs file. The events are as follows:

power[1-*]_cap will be notified if the firmware changes the power cap.
power[1-*]_interval will be notified if the firmware changes the averaging interval.