



Contribution ID: 224

Type: **not specified**

Dynamic Energy Model to handle leakage power

Tuesday, 13 September 2022 18:15 (15 minutes)

The Energy Model (EM) framework describes the CPU power model and is used for task scheduling decisions or thermal control. It's setup during the boot in one of the supported ways and is not modified during the normal run. Although, not every chip has the same power characteristics and cores inside might be sensitive to temperature changes in different way.

To address better the variety of silicon fabrications we want to allow modifications of the EM at runtime. The EM runtime modification would introduce new features:

- allow to provide (after boot) the total power values for each OPP not limited to any formula or DT data
- allow to provide power values proper for a given SoC manufactured - with different binning and read from FW or kernel module
- allow to modify at runtime power values according to current temperature of the SoC, which might increase leakage and shift power-performance curves for Big core more than for other cores

I agree to abide by the anti-harassment policy

Yes

Primary author: LUBA, Lukasz

Presenter: LUBA, Lukasz

Session Classification: Android MC

Track Classification: LPC Microconference: Android MC