Chair for Integrated Systems
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Seminar

Knobs and Their Influenced Metrics for Runtime Performance and Power Optimization on MPSoCs

Modern multi-processor system-on-chips (MPSoCs) are designed to manage high peak performance when requested by the user, but also need to be very power efficient in stand-by mode for certain devices like mobile phones. To manage the large dynamic range between the two mentioned operating points those chips include several knobs to be changed while runtime to switch from one mode to another.

The goal of this seminar topic is to do a literature research on the different knobs currently available at hardware, as well as at software level to change a system's performance while runtime. The survey should compare the different knobs in respect to their impact on performance, power, local vs. global performance and the periodicity they can be applied. Further the different application / cpu performance metrics influenced by each knob should be mentioned.

Advisors

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