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Title: **Power efficiency study of multi-threading applications for multi-core mobile systems**

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Abstract: One constant in computing which is true also for mobile computing is the continue requirement for greater performance. Every performance advance in mobile processors leads to another level of greater performance demands from newest mobile applications. However, on battery powered devices performanoe is strictly limited by the battery capacity, therefore energy efficient. applications and systems have to be developed. The power consumption problem of mobile systems is in general a very complex one and remained very actual for quite a long time. In this paper we aim to define a software execution framework for mobile systems in order to characterize the power consumption profile of multi-threading mobile applications. Study results for different thread libraries, multi-core processors and multithreaded parallelized applications are also presented.

Number of references: 19

Main heading: Mobile computing

Controlled terms: Applications - Electric power utilization - Embedded systems - Energy efficiency - Mobile telecommunication systems

Uncontrolled terms: Mobile applications - Multi-core - Multi-threading - Power consumption - Power profiling

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