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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 performance 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.

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Note: OCR errors may be found in this Reference List extracted from the full text article. ACM has opted to expose the complete List rather than only correct and linked references.

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↑ **INDEX TERMS**

Primary Classification:

D. [Software](#)

↳ D.4 [OPERATING SYSTEMS](#)

↳ D.4.1 [Process Management](#)

↳ **Subjects:** [Threads](#)

Additional Classification:

C. [Computer Systems Organization](#)

↳ C.2 [COMPUTER-COMMUNICATION NETWORKS](#)

↳ C.2.1 [Network Architecture and Design](#)

↳ **Subjects:** [Wireless communication](#)

↳ C.2.4 [Distributed Systems](#)

↳ **Subjects:** [Distributed applications](#)

D. [Software](#)

↳ D.1 [PROGRAMMING TECHNIQUES](#)

↳ D.1.3 [Concurrent Programming](#)

↳ **Subjects:** [Parallel programming](#)

↳ D.4 [OPERATING SYSTEMS](#)

↳ D.4.8 [Performance](#)

General Terms:

[Design](#), [Management](#), [Performance](#)

Keywords:

[mobile applications](#), [multi-core](#), [multi-threading](#), [power consumption](#), [power profiling](#)

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