

Semester Thesis “Enhanced Task Scheduling in TinyOS”

TinyOS is the quasi-standard operating system for wireless sensor nodes. Its event-driven architecture is tailored for measuring real-world phenomena. In order to support coarse-grained concurrency in this otherwise single-threaded operating system, TinyOS provides a semantic construct called task. Tasks allow the programmer to include some sort of hand-made concurrency. These tasks are then scheduled in a simple first-come first-serve semantic.



In this thesis you will implement a more sophisticated scheduler that allows priority based scheduling of tasks. You will therefore first become acquainted with TinyOS and the event-based programming paradigm it exhibits. The goal of the thesis is to come up with a clean and easy-to-use extension of the TinyOS scheduler that features priority based tasks.

Required

- Advanced programming skills
- Basic C knowledge
- Interest in working with an embedded platform

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