Thesis Plan

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Preliminary title

A study on the effects on performance and maintainability the libuv library has on low-cost ARM-based IoT-devices.

Problem description

The IoT industry is rapidly growing. Ericsson has made a forecast that around 400 million IoT-devices will be connected by the end of 2016, and by the end of 2018, they will surpass in numbers the amount of mobile phones that are connected to the cellular network. This increases the importance of performance and maintainability of embedded devices.

Approach

Study some cases of IoT applications used in the industry; their architecture, libraries used and benchmark tests. Use this information to compare similar implementations used with the libuv library to find the difference in performance and maintainability.

Literature base

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[9] Jamil, Tariq. "Risc versus cisc." *Ieee Potentials* 14.3 (1995): 13-16.
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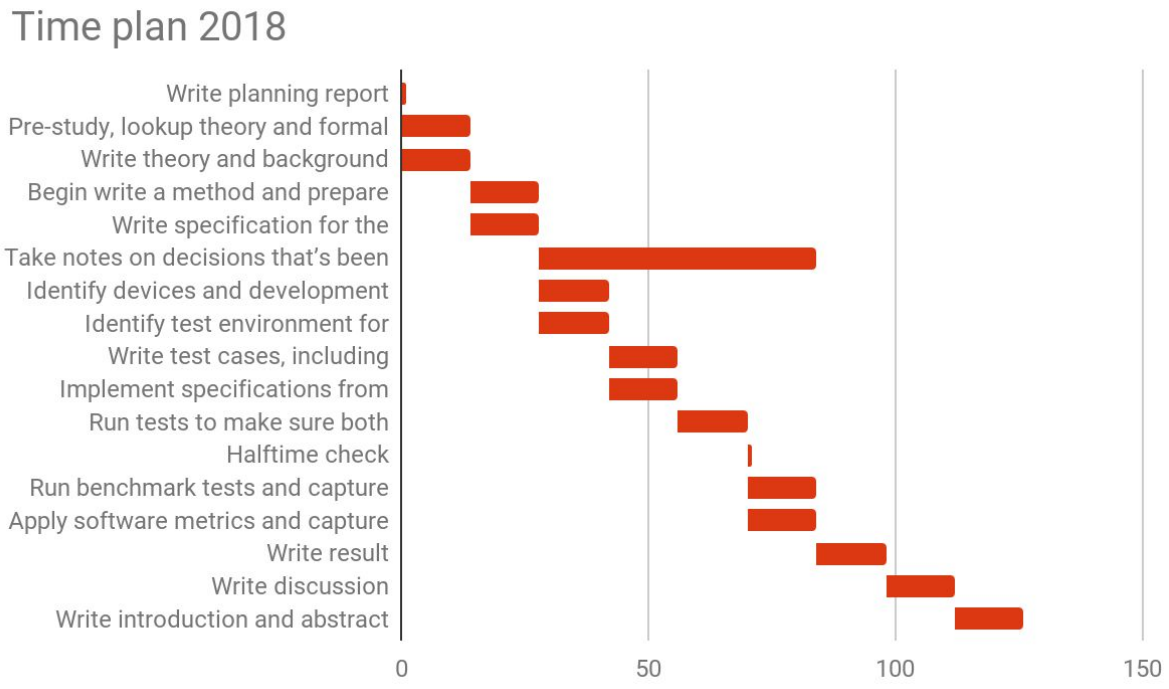
Time Plan



Tasks

1. Write planning report
2. Pre-study, lookup theory and formal methods
3. Write theory and background
4. Begin write a method and prepare
5. Write specification for the implementation
6. In parallell with the following tasks: take notes on decisions that's been made and how the implementation has been made for replicability
7. Identify devices and development environment
8. Identify test environment for hardware and software
9. Write test cases, including automatic
10. Implement specifications from method
11. Run tests to make sure both implementations fulfill the specification
12. Halftime check
13. Run benchmark tests and capture results
14. Apply software metrics and capture results

15. Write result
16. Write discussion
17. Write introduction and abstract