Results from the Validation of ECETES

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Abstract

In this report, we present the validation results for the implementation of the logging strategy the Extended Constant Eviction Scheduler (ECETES). The account of these results are not intended to be stand-alone, but require the insights published in other sources.

The implementation that was validated through this series of tests is available as a technical report [1].

Properties	Task A	Task B
Deadline [time units (tu)]	2000	8000
Execution time [tu]	990 - 999	3960 - 3999
Data-state [bytes]	1100	1100

Table 1: Simulator taskset 1.

Properties	Task A	Task B
Deadline	4000	8000
Execution time	990 - 999	3960 - 3999
Data-state	1100	1100

Table 2: Simulator taskset 2.

Properties	Task A	Task B	Task C
Deadline	2000	4000	8000
Execution time	990 - 999	990 - 999	990 - 999
Data-state	1100	1100	1100

Table 3: Simulator taskset 3.

Properties	Task A	Task B
Deadline [time units (tu)]	1'000	10'000
Execution time [tu]	99 - 103	990 - 999
Data-state [bytes]	1'100	1'100

Table 4: Simulator taskset 4.

Properties	Task A	Task B	Task B
Deadline	1'000	5'000	10'000
Execution time	99 - 103	99 - 103	990 - 999
Data-state	1'100	1'100	1'100

Table 5: Simulator taskset 5.

Properties	Task A	Task B	Task C	Task D
Deadline	1'000	4'000	8'000	12'000
Execution time	99 - 100	99 - 103	99 - 105	990 - 999
Data-state	1'100	1'100	1'100	1'100

Table 6: Simulator taskset 6.

Properties	Task A	Task B	Task C	Task D	Task E
Deadline	1'000	6'000	12'000	18'000	24'000
Execution time	99 - 100	99 - 102	99 - 103	99 - 105	99 - 108
Data-state	1'100	1'100	1'100	1'100	1'100

Table 7: Simulator taskset 7.

Properties	Task A	Task B	Task C	Task D	Task E	Task F
Deadline	1'000	2'000	6'000	8'000	12'000	16'000
Execution time	99 - 100	99 - 101	99 - 102	99 - 105	99 - 108	990 - 999
Data-state	1'100	1'100	1'100	1'100	1'100	1'100

Table 8: Simulator taskset 8.

Properties	Task A	Task B	Task C	Task D	Task E	Task F	Task G
Deadline	1'000	3'00	5'000	6'000	10'000	12'000	15'000
Execution time	99 - 100	99 - 101	99 - 102	99 - 103	99 - 104	99 - 105	990 - 999
Data-state	1'100	1'100	1'100	1'100	1'100	1'100	1'100

Table 9: Simulator taskset 9.

Bibliography

[1] Joel Huselius. Source-code to the ECETES logging strategy. Technical Report, Mälardalen University, Department of Computer Science and Engineering, August 2003. Available at www.idt.mdh.se/~jhi.

Appendix A

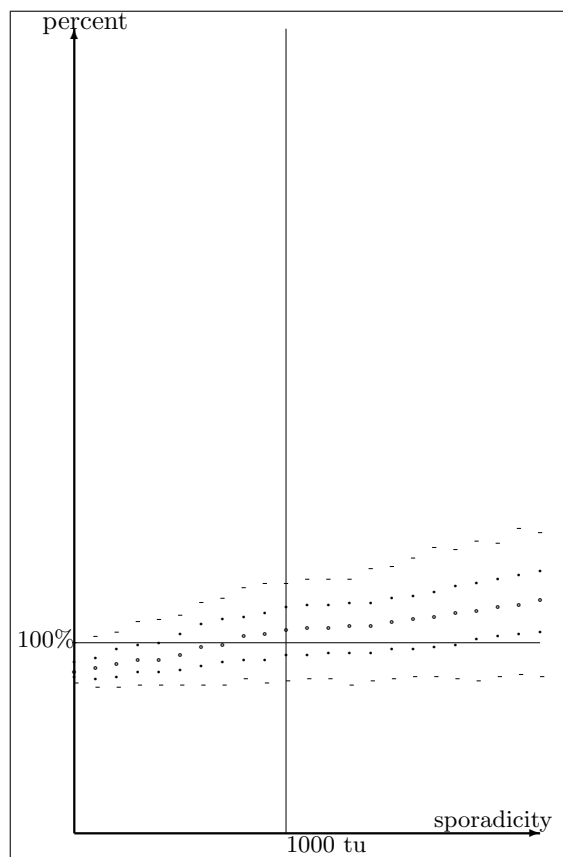# Test results 1st batch

percent

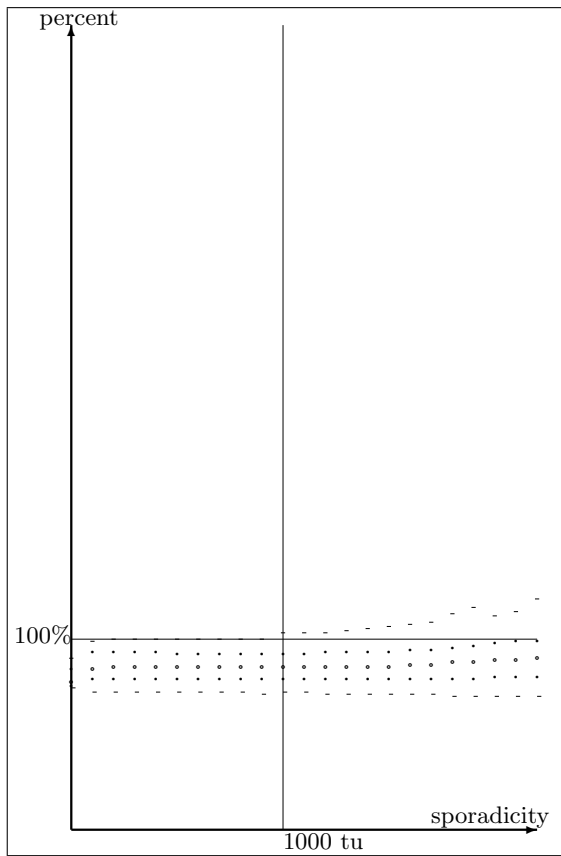100%

1000 tu

sporadicity

Figure A.1: Simulation results using taskset 1.

Figure A.2: Simulation results using taskset 2.
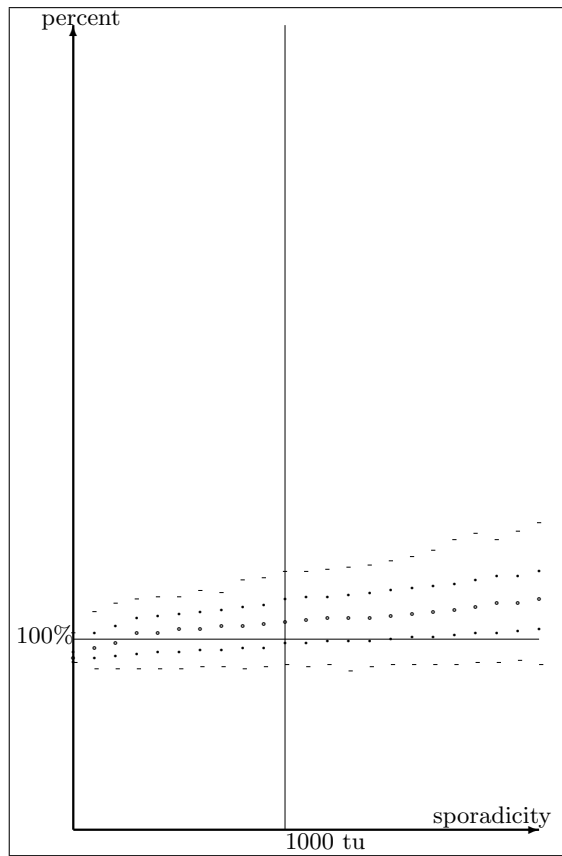
Figure A.3: Simulation results using taskset 3.
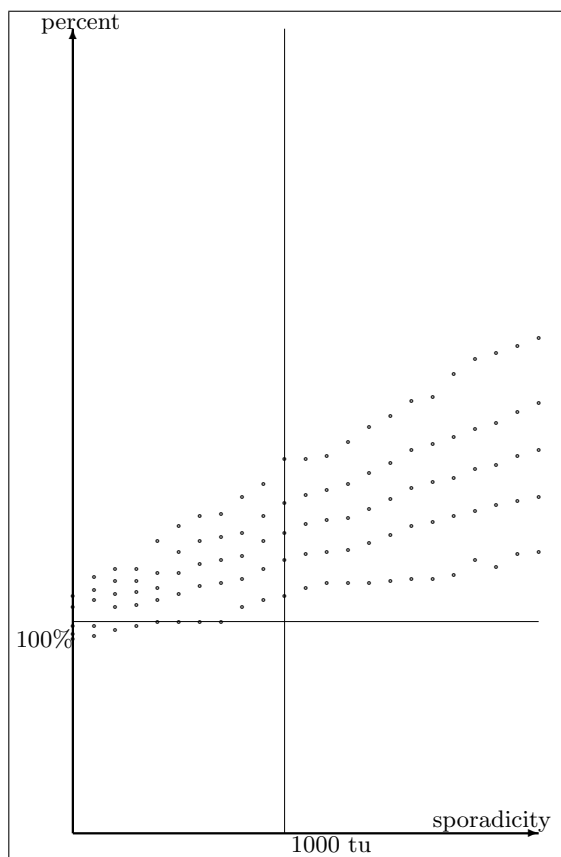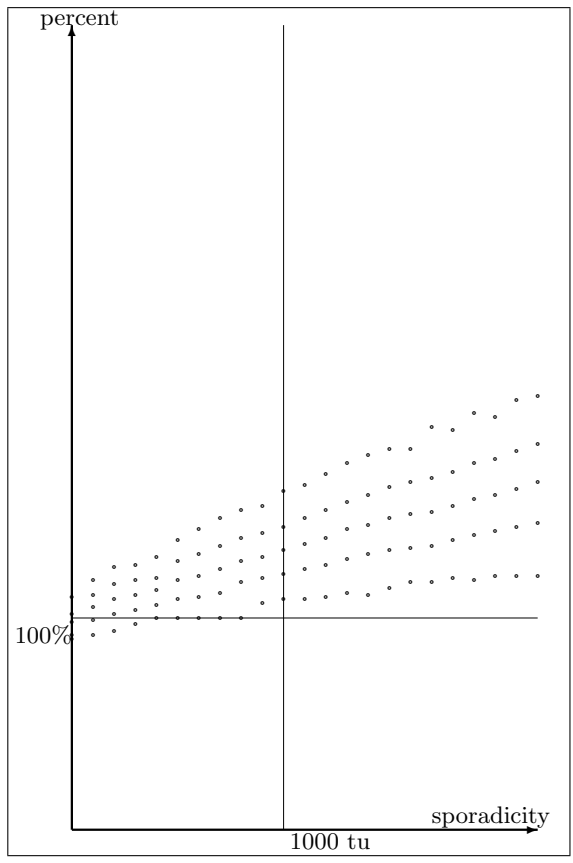
Appendix B

Test results 2nd batch

Figure B.1: Simulation results using taskset 4
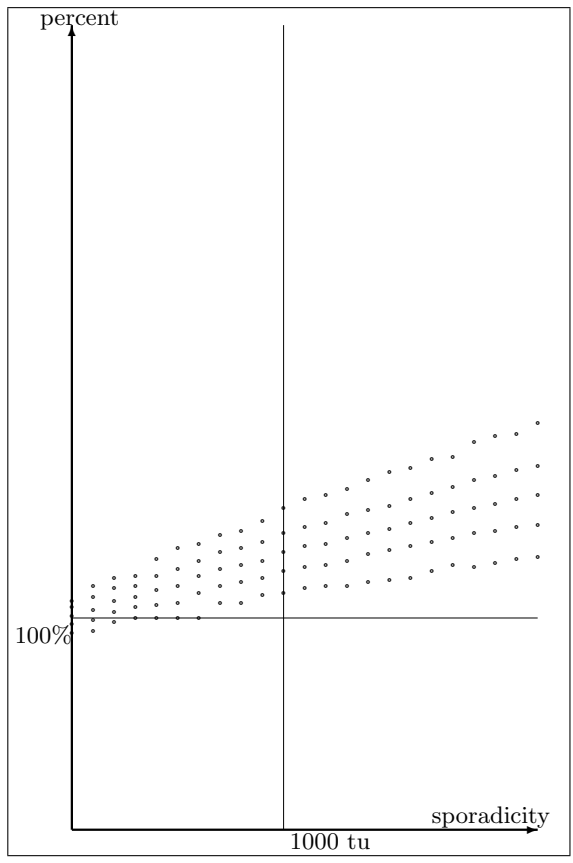
Figure B.2: Simulation results using taskset 5

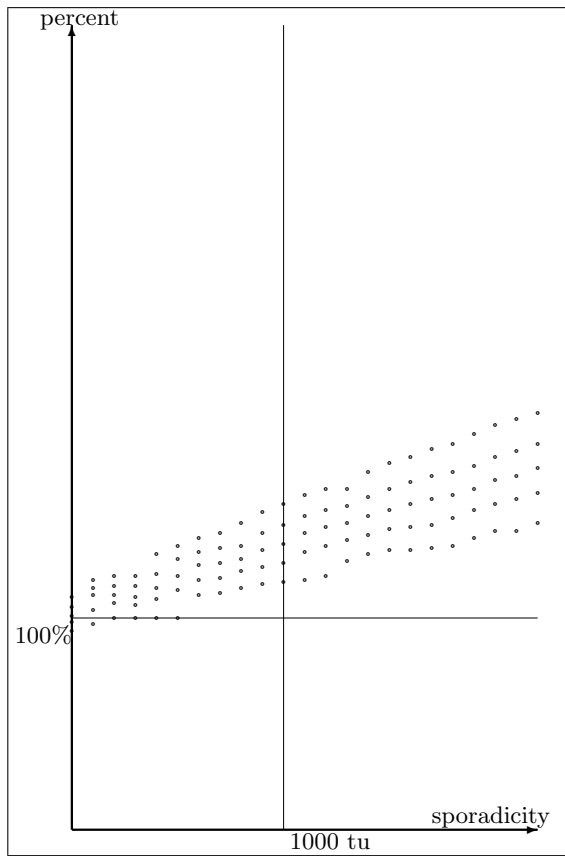Figure B.3: Simulation results using taskset 6
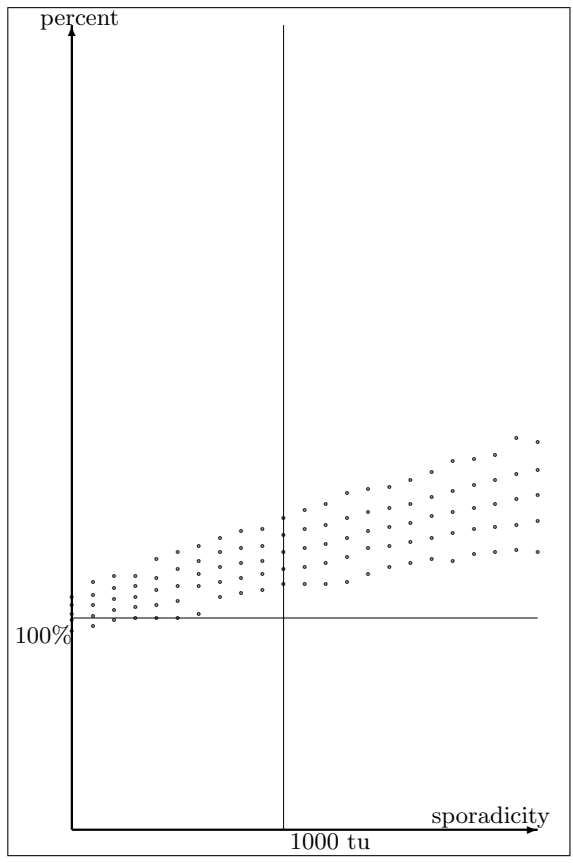
Figure B.4: Simulation results using taskset 7
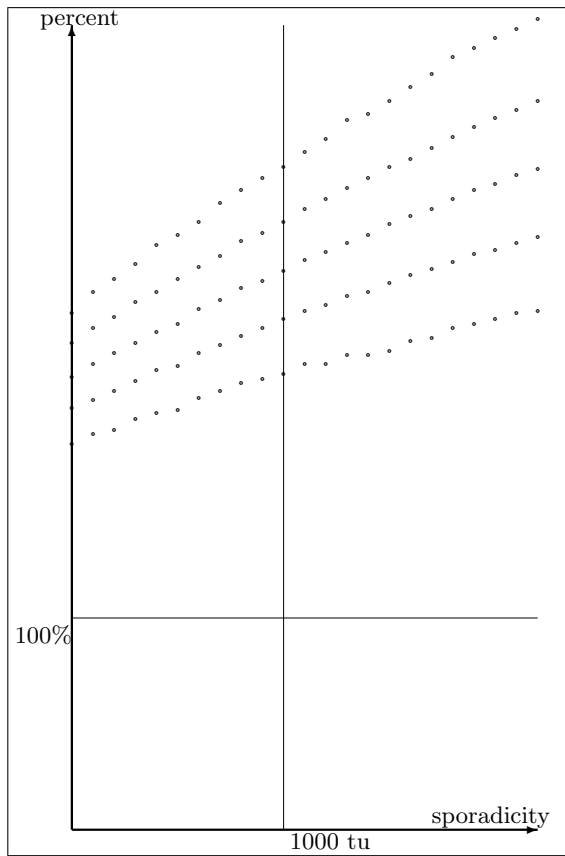
Figure B.5: Simulation results using taskset 8

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Figure B.6: Simulation results using taskset 9