Assignment 2: Analysis for hierarchical fixed-priority pre-emptive scheduling (dependent applications)

There are a number of approaches to deal with resource sharing between applications in systems with hierarchical fixed-priority pre-emptive scheduling. For this assignment, you have to study and compare the articles describing those approaches. Your report should at least address the following issues:

- Real-time scheduling models: which assumptions are made, in particular
  - How does the task-model look like?
  - How does the budget-model look like?
  - How does the resource access protocol look like?
- What are the implications of these assumptions for the analysis of:
  - individual tasks?
  - applications?
  - budgets?
  - a real-time system?
- Do the claims made in the various articles hold (e.g. completeness and correctness)?
- A summary of your findings with pros and cons for the approaches.

You are expected to give a 25 minutes presentation (including time for questions) addressing:

- one of the three papers;
- the relative [dis-] advantages of the approach in that paper compared to the other approaches in the other two papers.

References


Further information

In case you have any questions concerning this assignment, please contact:

Reinder J. Bril,
email: r.j.bril@tue.nl.