

# The Task Space Searcher (TSS) Project Report

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## Introduction

I am writing a schedulability analysis tool in Perl that supports EDF and DM scheduling policies, as well as the PIP and PCP priority schemes. This tool will allow one to search a problem space for feasible configurations.

This document reports the development status as compared to previously established milestones. Full project information is available at <http://www4.ncsu.edu/~tkblets/714/project.html>.

## Completed Milestones

### 24 Oct: TDA (without blocking term)

This milestone has been completed. This tool had been started but never completed during my earlier development for previous homework assignments and my own studying efforts.

### 31 Oct: Generalized TDA (without blocking term)

This milestone has also been completed. Much of the work had already been done, as I developed a simple TDA tool for previous homework assignments and my own studying efforts.

## Future Milestones

### 7 Nov: System density (not including blocking term)

This milestone appears to be completely straightforward, since the summation involved is a simple calculation.

### 14 Nov: File parser

This will be a major step, as the parser will have to be able to iterate all possible task states but not store these states in memory because of the potential combinatorial explosion.

### 21 Nov: Blocking term $b_i$ calculation for PIP and PCP

This will be a straightforward but large undertaking. All the rules are well explained, but the transitive closure of resource utilization must be taken into account.

### 28 Nov: Add blocking term $b_i$ to all analysis methods

This simply consists in integrating the result of the previous milestone into the existing analysis, which doesn't appear too distressing.

## Conclusion

The project is on target and well within schedule.