

# **Status Report for Project 1**

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## **I. Current Status:**

My current status is both good and bad. My original problem turned out to be quite complicated, and all together difficult to implement. So, the problem has been changed to be easier to implement and more computationally intensive. Instead of summing the gravitational forces of many massive particles, I will be simulating the movement of thousands of particles during an explosion. This should prove to be much easier to implement and can be more computationally intensive as the particles can, and will, collide.

## **II. Changes From Previous Meeting:**

The problem specification has been changed, but enough code from the failed first problem can be reused to make the new problem easier to implement in the shortened time frame.

## **III. Accomplishments of Objectives from Previous Meeting:**

None. The problem needed to be changed and therefore nullified the objectives from the previous meeting.

## **IV. To Do by Next Week:**

Single process, MPI, OpenMP, and a hybrid implementation of the code. After the single process implementation is written the OpenMP implementation is trivial, and a MPI solution will be straightforward. The hybrid implementation will also be trivial after a MPI solution is derived.

## **V. Risk Analysis:**

This is a risky move, but I feel that it can be pulled off. I have plenty of time this week and weekend to work on this project, and a good portion of the code is written.

## **VI. Time Frame Control:**

Off-schedule, but easily recoverable.

## **VII. Related Documents:**

None.