Major Changes:
Nothing major.

What I have accomplished so far:
Last report, I mentioned that there was this idea that I wanted to try; we haven’t gotten around to that yet. However, after thinking about the algorithm a bit more, I think it might not work given that it will most likely break one of the invariants that was in the proof. In any case, I still think it might be a good idea to try nonetheless since it’s still possible that it might be a good variation but then, I would probably have to prove it some other way (and most likely, it will provide different bounds).

Instead, we have started to try to see how the CRD algorithm performs on various graphs. The spectral graph cut algorithm does exceptionally poor on graph such as a bunch of trees connected by a path.

Meeting my Milestone
Here are the tasks that I set out to do:

• Develop my idea of making the algorithm more aggressive and see where that goes.

• Be ready to experiment with different variants of this algorithm.

I didn’t get to have the chance to really implement my idea; however, I have given it a lot of thought and probably won’t pursue it too aggressively (I don’t think it will work). In the meantime, we have began experimented with the algorithm on different inputs.

Surprises:
None.

Revisions to Milestones
For the Feb 24 deadline, I would like to have a good picture of where I’m going. Hopefully, a week of experimenting with this algorithm would prove to give me a more intuition. The algorithm feels a bit more involved and complicated than necessary.

Specifically, by next week, I plan to experiment with the algorithm some more on different inputs and make minor variations on the algorithm. By the end, I would like to get a good idea of what path I’m going to go down in terms of making an improvement/making a variation for the final product of 15-400.

Resources Needed
No changes.