Heterogeneous Computing

Recommendation for Continuation

There is very little that can be done to continue this specific project. Our initial goals set at the beginning of the year were mostly successfully accomplished. The exception to this would be the full implementation of robustness. This was only partially completed, as we ran out of time. For a future Senior Design student to finish this part would not be extremely beneficial, since the PhD student we worked closely with, Luis Briceño, will be completing what we didn’t finish since a lot of his PhD work depends on its completion. The heuristics we set out to create, implement, and simulate have been completed and are producing viable results that far exceed the initial state of the Massive Multiplayer Online Game environment prior to implementing heuristical analysis. Therefore, we are calling this project “successfully completed.”

However, the use of heuristics in the realm of Heterogeneous Computing is virtually inexhaustible. The applications where heuristics are need to find “good” solutions in a massive global search space permeate our world. Heterogeneous Computing, as well as Parallel and Distributed Computing, is used extensively in many real-world applications. Thus, it is very feasible for multiple research and design projects to be created within this field for Senior Design. The many PhD students working under Professor Siegel concurrently work on multiple projects that could use lots of help in coding, simulation, debugging, research, etc.

We think our project is done, but we believe that Heterogeneous Computing can provide many more projects in the future for Senior Design students. They will find this field of study very applicable to real-life systems, as well as engaging, challenging, and rewarding in the end. We recommend more future projects in this area of design and research.