Proposal: Microgrid Data Agent

Deadline: April 15th, 2018

Summary: The proposal details a Java project to be completed by April 15th. The project should contain a JADE agent that receives live data from other Microgrid agents and displays it on a map.

Completion Criteria:

* An acceptable set of base java classes to model the data for the project will be created.
  + Classes should accurately represent the structure of a simplified power grid including generators, batteries, and links between them.
* For convenience, a dummy JADE sender agent will be included. This agent will not connect to live data. However, it will demonstrate to other developers how to use a JADE agent to send data to the main JADE receiver agent.
* The main JADE receiver agent will accept incoming grid topology data as well as measurements such as voltage from each node.
* The main JADE receiver agent will display incoming data on a map in near-real-time fashion. The map will make the grid topology obvious.
  + Map rendering may use web technologies instead of Java.
* Code will be well-documented such that other developers can maintain/reverse-engineer it easily.
* Code may use external technologies to make development faster.

Clarifications of Scope of Work:

* This project covers the handling of data from the time it is received by the receiving JADE agent to when it is displayed to a user. This project does not include JADE agents that will send data to the handler agent.
* This project does not include any hardware work.
* Examples of Sender agents and a some send code may be included for ease of integration. However, this project does not formally require the completion of any agent other than the one that receives and displays data.
* This project does not include the development of hardware-software interface code.
* This project does not include database integration or storage of data of any kind.

Compensation:

* $1,000 USD
* Credit in derived published work - Credit must be given in similar font to the rest of any paper under a “Credits,” “Acknowledgments,” or similar section.

Code Release Policy:

* Source code may not be released until monetary compensation is complete.
* Source code may be released before monetary compensation is complete. However, if it does so it remains under the copyright and intellectual property ownership of Jake Billings until monetary compensation is complete.