Sprint Report #5

March 11, 2016

Team Overview

Project

ARM Cluster

Members

- Andrew Hoover
- Christine Sorensen

Sponsor

Dr. Christer Karlsson

Meeting Times

Tuesdays and Thursdays at 1:00pm

Work Times

Tuesdays and Thursdays at 10:00am

Sprint Overview

Work for this sprint included:

- Designed new topologies.
  - Used usb-to-ethernet cords to create these topologies.
  - Created a 4 point and 8 point ring.
  - Created a hypercube.
- Created routing tabled for each ODROID.
  - Seeked advice from Dr. Qiao.
  - Debugged the errors of communicating.
- Researched GPIO communication.
  - Speed of the communication was benchmarked.
- MICS conference.
  - Was accepted to the MICS conference.
  - Began first draft of paper to deliver to MICS.
- SDSMT Research Symposium
  - Wrote abstract for our research to deliver to the SDSMT Research Symposium.

Deliverables

- Design for the hypercube and ring topology.
- Routing tables for each of the ODROIDs.
- The cluster connected with new topology.
- Able to send bits over GPIO between ODroid devices.
- Acceptance into MICS.
- First draft of MICS paper.
- SDSMT Research Symposium abstract.

Activities

Andrew Hoover

- Connected the cluster using the usb-to-ethernet cords.
- Designed the hypercube.
- Connected cluster into a ring and hypercube.
- Set new IP addresses to the ODROIDs.
- Debugged connection between the ODROIDs in new topology.
- Talked to faculty about networking and routing tables.
- Wrote routing tables.
- Debugged LINPACK to benchmark the new cluster connection.
- Edited sprint report.

Christine Sorensen

- Wrote SDSMT abstract.
- Began first draft of MICS paper.
- Designed the hypercube.
- Designed protocol for communication in the hypercube.
- Set new IP addresses to the ODROIDs.
- Updated documentation.
- Tested GPIO communication.
- Talked to faculty about networking and routing tables.
- Wrote routing tables.
- Wrote initial sprint report.

Work that is carried over into Sprint 5 is as follows:

- Write MICS paper.
- Prepare presentation for SDSMT's Research Symposium.
- Prepare presentation for MICS.
- Benchmark the hypercube cluster.
- Prepare for client presentations.

Backlog

- MICS presentation.
- SDSMT Research Symnposium.
- Completed hypercube cluster.
- Conglomerate data results.
- Design Documentation.
- Design Fair.