

Attendees: Kayden Chad Hatem Majed

### Action Items For Review: (15 min)

AI:21 Chad

Build a unit for synchronizing the power system in the advanced power lab to the Avista system. This action item is going to change to configuring a SEL-351 so that it can be used to synchronize the system. I plan to get a copy of the 351 documentation at work. (10/16)  
Due 11/15

AI:25 Stephanie Due 10/23 **Done**

Check on SEL T-Shirts. Stephanie found sweatshirts, so she asked for sizes. Kayden provided the sizes to Stephanie so that she could get them.

AI:26 Kayden 10/18 **Done**

Bring your "Go-Pro" to Lab on Sunday Evening for interview with Andy Miles

AI:27 Kayden 10/23 (update)

Lab work on Sunday will carry through the week.

Researched on communicating the microprocessor to the VFD.

AI:28 Kayden 10/23 **Done**

Add snapshot day in December to the Gantt chart

AI:29 Majed 10/23 **Done**

At least 3 or 4 procedures will be written up lab time.

## New Agenda Items

Review goals for lab on Sunday Evening:

Chad

- Get the cerebot talking to the encoder
  - I spoke to Dr. Santora about my first attempt. He made two recommendations, verify the part number on the encoder and reduce the frequency.

Majed

- Conduct one of the tests, it has not been picked yet
  - Windage loss, friction loss,  $I^2 R$  losses and ID Run
- Hoping to get the hardest one out of the way
- Work on the RSCAD tutorial
  - We started the tutorial on RSCAD and made some good progress on learning that.

Hatem

- Hook the load bank directly to the machine

- Hooked the load bank up to the Model Power System
- Andy went over the connection to the model power system, the load bank connections, and RSCAD tutorial/documentation.

#### Kayden

- Put on paper the connections to the VFD and the board. Create a list of registers that would be nice to see written to. (Change reference or increase/decrease speed).
- Mostly planning research, probably not too much hands on.
  - Kayden worked on researching the communication protocol.
  - The protocol is MODBUS and Kayden has worked with that at work. (Good news for us).
- Filmography

Kayden has an updated Gantt chart that includes items from Majed and Hatem. We will review the Gantt if there is time and start talking about time in the power lab each week.

Team is waiting on feedback from Dr. Johnson regarding the client interview transcript.

Dr. Johnson completed his review of the client interview and signed an edited copy. Majed incorporated those edits with the copy on the team google drive.

Majed and Hatem will be working with Andy opportunistically throughout the semester for learning.

## New Minutes

Majed had the following questions for Dr. Johnson et al the experts.

1. We have to decouple the machine, who do we need to talk to regarding the decoupling?
  - a. According to Dr. Hess, we can simply loosen the couplers and slide them back. I will bring tools to lab Sunday.
2. Blocked rotor test, who do we need to talk to about blocking the rotor?
  - a. According to Dr. Hess, the start up torque is fairly low. We can put a rag over the shaft and clamp vise-grips onto it. The pliers should be placed against something to prevent rotation.
3. Is the temperature important for testing? According to the IEEE standard 112 - ? Standard Test Procedure for Polyphase Induction Motors and Generators, it is important.
4. Can we input parameters into the VFD? Or is our job to measure the parameters and insert them into the RSCAD model?
  - a. This is a good question for Dr. Johnson.
  - b. Majed is planning to speak to Michael West as well.

Dr. Li talked about what is coming up soon. The WIKI page is due 10/30. Also, preliminary design reviews will be done the first three weeks of November. We should try to get the

10/23/2015

Byte-Back Team Agenda / Minutes

design review done earlier than later, since the Master Thesis Defense will be in about the third week of November so the professors will have a hard time attending.

Stephanie asked about the Snapshot day. Kayden gave a nice overview. Generally, the discussions were mostly with engineering types, so we got good feedback, but we didn't get a chance to sell our project to non-technical types of people. Dr. Li, from an outside observer point of view felt like the slides looked really good. Also, Dr. Hess gave us some advice on how to get the voltage levels down to a manageable level so we could measure zero crossings with the microprocessors.

Dr. Li advised us to think about how we would explain our project to a high school student.

AI:26 Kayden Due 11/06

Kayden will talk to JJ about installing WEBEX software for "all users" onto the conference room computer for meetings with Stephanie.

AI:27 Kayden Due 11/06

Figure out how to print the Gantt chart for the next meeting with Stephanie.

AI:28 Hatem Due 10/30

Attend senior design next week dedicated to the WIKI page development. The first WIKI page review is next Friday. Hatem will be making sure the WIKI frame is up and ready to review.

AI:29 ALL Due 10/30

We will spend the meeting of the 30th to plan our design review and decide on a date for presentation.