

Lunar Flywheel Client Interview - Transcript

Wednesday September 21 2016

Present: Dr. Herb Hess, Dr. Feng Li, Justin Pentigill, David Arnett,
Shea Morrison, Nick Bachus, Matt Phillips, Kyle Peterson, Cooper Atkinson,
Ian Tanimoto, Andrew Jones, Brian Cartwright

GJ 218 Conference Room
Meeting Commenced 3:30PM

- How many portfolios should this senior design have in the end?
 - o The team should submit two portfolios at the end of the year. One for the stator design team and one for the controls team. Each subgroup will have their own portfolio keepers. These keepers will be Matt Phillips for the stator design group and Andrew Jones for the controls group.

- What are the project deadlines/ milestones?
 - o Generally stick with the senior design guidelines
 - o Each of the subgroups will need to make their own outlines and priorities.

- Any specific design specifications?
 - o Speed should be between 25,000 to 30,000 rotations per minute with approximately 100x the amount of energy storage as the low speed.
 - o Models need to be adjustable with variables; nothing should be hard coded.
 - o The stator design team should strictly focus on the model for the stator and nothing else.
 - o Weight of the stator is not a concern but should be within reason. Material price and manufacturing are the bigger factors.

- Will we be doing any 3D modeling of the stator and/or the rotor?
 - o A model in Solidworks would be good for visualization
 - o Keep manufacturing and machining in mind but the teams will not need to focus on building it. This senior design team's main goal is to design a model to guide the construction.

- What are the available resources, tools or programs
 - o ANSYS, Simulink, Matlab, FEMM, MathCAD
 - o All of the existing models can be found at: ShareDrive>Senior Design>Group Folders>Flywheel

- What are the controls systems requirements?
 - o Verify what has already been done. Evaluate what parts of the algorithms and sensors will need to be updated/redesigned for the high speed design.

Client Interview approval signatures:

X

David Arnett
Team Grad Student

X

Justin Pettingill
Team Grad Student

X

Dr. Herb Hess
Client