LITHIUM ION BATTERY BY STORED ENERGY INNOVATIONS

WITH INTEGRATED BATTERY MANAGEMENT AND DATA LOGGING

Status: Filled

Group Members: Filip Primozic, Kevin Wubs, Eric Wilson, Trevor Woods, Brendon Sauer

Sponsor(s):

Supervisor(s): Siamak Arzanpour, PhD, PEng, Assistant Professor, Mechatronics Systems Engineering

Project Description

The proposed Lithium Ion Battery entails a battery management system which includes monitoring the state of the pack, protecting and/or balancing the pack as well as providing detailed analysis for an end user.

The project can be modularized into sub components that include the mechanical structure, digital design and firmware, electronic hardware development, and PC software design.

These modules will be brought together with the goal of creating a product that minimizes the technical requirements of the end user. To do this the battery will have to protect itself against dangerous conditions internally and from its surrounding environment via its integrated data and battery management system. To maximize the user experience the data logger and provided software will have to be intuitive and efficient.

TIMELINE
Each individual module has a unique timeline that will converge with the overall project at an initial alpha design. The Gantt chart shown in Figure 1 shows the general trend for internal group deliverables, but may be deviated from with further project planning.

TEAM MEMBER RESPONSIBILITIES
Filip Primozic: Thermodynamic and heat transfer, feedback and data analysis algorithm design
Kevin Wubs: Chief mechanical designer
Eric Wilson: Firmware and hardware design
Trevor Woods: Firmware and software design
Brendon Sauer: Hardware design and hardware abstract firmware design