

ELECTRONIC BRAKE CONTROL MODULE - REVERSE ENGINEERING

Overview

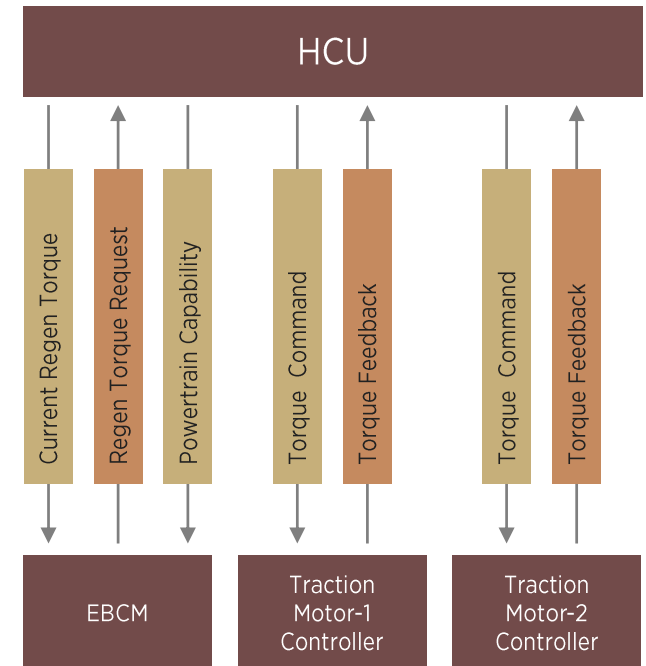
Objective of this project is to create functional requirements from Matlab/ Simulink/ Stateflow models for EBCM-Electronic Brake Control Module. This work has been done for an OEM

EBCM Reverse Engineering

- Based on the brake pedal travel, EBCM request regen torque from HCU
- Regeneration Torque based on vehicle speed
- Traction motor regeneration torque limit
- Interface Requirements(Sensors, Actuators, CAN)
- Hybrid Control Unit(HCU) to EBCM CAN Signal Requirement
- Diagnostic Requirements
- End of line requirements

Scope

- Analyze existing Simulink/ Stateflow models of Hybrid Control Unit, identify subsystem boundaries, identify Input/ outputs for features (CAN, Physical IO)
- Review our high-level understanding of feature with customer
- Subject matter expert interaction
- Put together System, Functional, Diagnostics, Calibration requirement
- Develop UML diagrams such as interface, sequence, dependency diagrams
- Involving Upstream and downstream stakeholders in critical expert reviews
- Upload requirements into Polarion (ALM) software



TOOLS

- MATLAB Simulink 2013b
- Quantum Tool
- Motohawk Library
- Enterprise Architect