PDR Presentation Meeting Minutes

Held: AEC429 on 2/3/16 and AEC513 on 2/4/16
To: Professor Nadovich and Professor Yu
From: ECE 492 Students

Feb 3, 2016:

- Slide 1:
  - Are we going to do that or not? Can't say "we hope to accomplish"—have to commit

- Slide 8:
  - Vscada computer is not in GLV? VCI should include VSCADA
  - No software blocks on a hardware diagram!
  - Software should live in various computers
  - Need a decent diagram of the system: overview of each component, interfaces etc.
  - Signal flow diagram -> safety loop line make green

- Slide 9:
  - Packs should be able to be charged by themselves→ PacMan should be able to know it is being charged, SCADA has nothing to do with that.
  - SCADA is just displaying (r002j) charge data, not involved with charge algorithm.
  - It would be useful for scada to know that the packs are being charged→ so it can prevent car from starting
  - He accepts the waiver for R002j → which is basically R001a
  - Maybe SCADA should know when it is charging
  - Do we commit to communicating to PacMan with VSCADA while charging?
  - Reducing R002m: only proposing to display individual battery voltage
  - Measurand object approach
  - Display vs Data acquisition
  - Should waive a more appropriate requirement related directly to display
  - Calibration:
    - Start with Raw measurement
    - Next, create an algorithm to set proper offsets etc
    - Calibration factors not hard coded
    - No GUI needed for calibration
  - R002m:
    - Waive GPS [agreed]
    - Must be calibrated
    - Proposed new requirement not acceptable, too short
  - R002h,i: Drive mode/Drive demo mode
    - Need some software that goes in the car and manages it, cannot waive

        - Put embedded processor in TSI, it manages drive mode, talks can with SCADA to know state. Should it be on the dash?
            - Only objection is, dashboard is really crowded. Last year didn't want to put VCI on dash.
        - If this functionality comes our of SCADA, it has to go somewhere else
        - "Good luck. Two times the computers is four times the work." –Nadovich

- Slide 11:
    - AIRs are the only things that stop voltage leaving the pack, what do the states mean?
        - How is PacMan going to stop voltage going out?
        - What we could do is make the pack part of the safety loop
        - It could prevent the AIRs from closing if it isn't in the right state
    - Need reset button on control panel

- Slide 12
    - Delay new FormHyb spec until next year ("jumper cables" from AMS for testing)
    - PacMan powers itself off cells
        - DC-DC converter (designed by JG) to step high voltage down (buck converter), may have some hiccups, more protection needed

- Slide 13
    - Write ATP so we can test and demo TSV independent of SCADA
    - Budget for 3 additional packs does not have to be accounted for in our budget, only the first pack

- Slide 14
    - Need detailed descriptions, no "design," "think about," etc.
    - Individual progress reports should have one milestone a week
        - Waived: we don't need any milestones ever

- Slide 16
    - R003a
        - Waive acceptable
    - R003g (should be 003f, fix it)
        - Don't need a pedal, but it should have a place to be put in for the future
        - Motor controller has a voltage input, should be physical throttle?
        - Somewhere, there is a hardware throttle that controls the motor
    - Jumping to R002k
        - No, we don't understand what we're waiving
    - R002b
        - Cannot waive
    - Trade proposal: 1 bit of D2A for SCADA in exchange for not doing conference paper

Feb 4, 2016:

- Reviewed minutes
- Brendon will be responsible for R002b
- Drive Mode etc. must be assigned to a team member
- GPR003 waived
- D009 waived
- Wiring discussed. Cannot be finalized without frame/physical car. Proper grouping for separate encloses should be done. (where do displays go? who is it for?)
- Driver displays should be minimal - ok light - not ok light - speed - soc - imd
- Budget not accepted. Pare down to 3000
- Schedule - milestones spread throughout the term - current form not accepted.
- Motor Model - what tolerances/accuracy
    - calibration needed before data collection
    - prep is more difficult and time
- Revised PDR due monday
- Presentation updated and posted to website by 4 pm friday