|  |  |  |
| --- | --- | --- |
| Minutes | | |
| Date: | 13. November 2013 |  |
| Place: | LEM, Plan-les-Ouates, Geneva |
| Present: | Gauthier Plagne, Andrea Vezzini, Patrick Haldi |
|  | | |
| **First Meeting** | | |
|  | | |

Contents of the meeting:

* Introduction to LEMs products and measuring principles
* Defining the parameters to measure
* Defining the contents of the technical proposal
* Defining the responsibilities for the material provided by both parties

Meeting results:

* LEM has already performed linearity and gain measurements for their new fluxgate sensor CAB300.
* Now Charge (Ah) measurements need to be done.
* There will always be at least two sensors measured at one time (the reference sensor plus one to three additional sensors).
* The sampling rates will have to be evaluated. The reference sensor should be sampled as fast as possible. The CAN-Bus-sampling time will be about 10ms. It is to find out if 20ms work as well.
* Channel Synchronisation: This is an open question. We either sample the current values with a timestamp and then a post-processing tool (e.g. Matlab) will do the interpolation and Ah-Counting, or we synchronize the sampling time as an integer fractional of a second (100ms means 10 values will give 1s).
* Another issue are the different time-bases, which are used (test bench, CAN communication): how do we make sure that the difference will not result in a drift of the calculated value and how do we make sure that all measurements start at the same time.
* Three channels in parallel will be used, that provides up to 600A.
* LEM will provide a reference sensor ITL900, a test profile file and the details for the CAN-protocol of the current sensor.
* To calculate the total charge, the backward Euler integration can be used. It is to check if the trapezoidal integration brings better results.
* The technical proposal file should contain:
  + if it is possible for BFH to measure sensors with the following interfaces:
    - CAN
    - Analogue
    - LIN
    - PWM
  + the possibilities of the temperature chamber
  + details about the cable diameter of the test facility (important for the reference sensor)
  + timeline proposal for project
* Date of delivery of technical proposal file: Dec. 16th 2013

For the minutes:

Keeper of the minutes: Patrick Haldi, Biel, 2. December 2013