FACHHOCHSCHULE KIEL University of Applied Sciences	Status Report	
Author:	Project: Battery management system	Date:
Project group 3	Period: 18.05.2015 to 1.06.2015	1.06.2015

Project

Goal	Development of a battery-management-system, including the modelling of the environment to enable a hardware-in-the loop testing.
Project manager	Manuel du Bois
Team	Frederico Jose Dias Möller, Ingmar Molt, Manuel du Bois

1 Summary

1.1 Rating of status

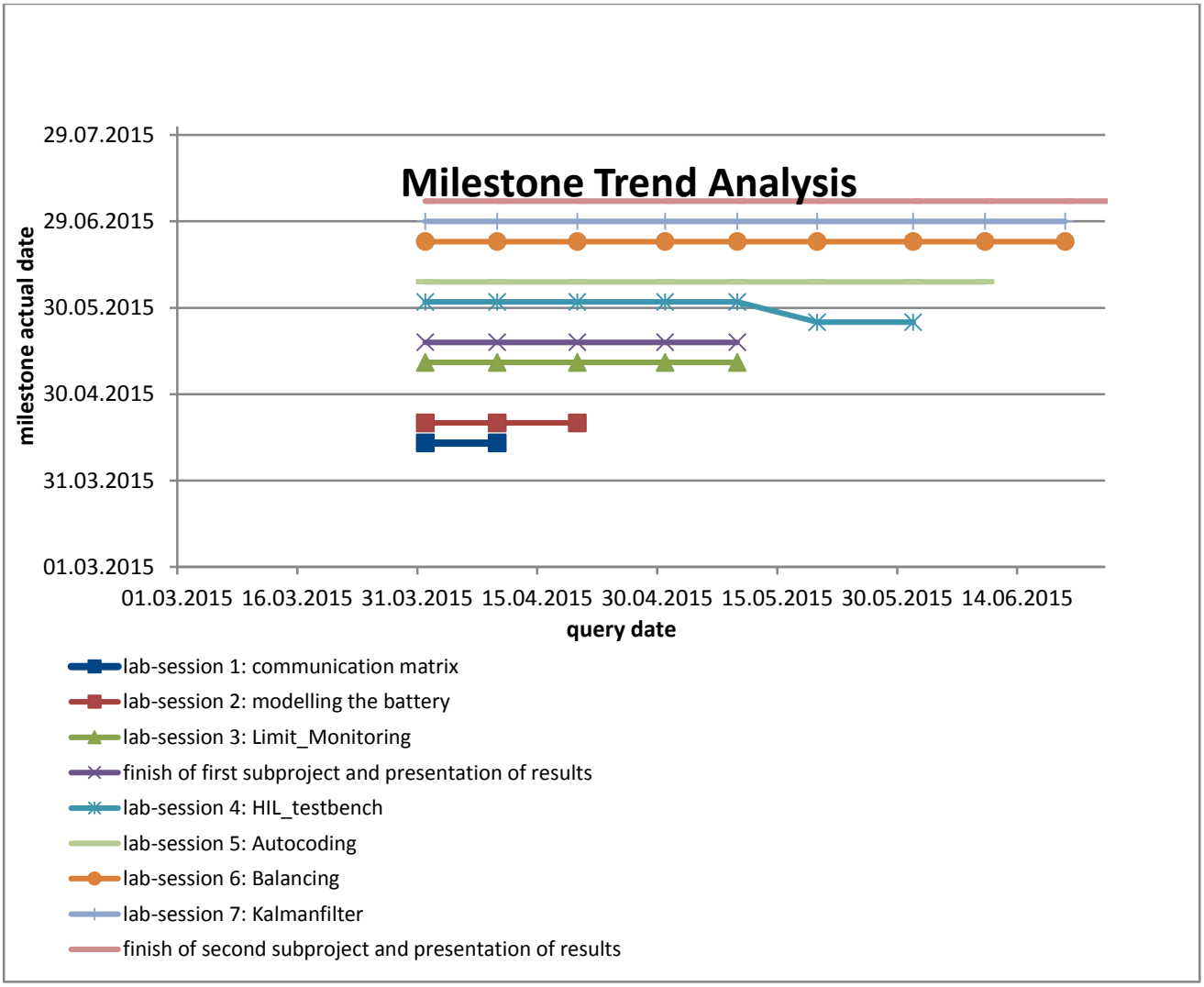
Subproject Name	Project – Leader	status				progress	comments
		time	budget	function	technology		
Communication-matrix		+	+	+	+	completed	
Modelling the battery		+	+	+	+	Completed	Polynomial interpolation of OCV-Values implemented
Limit monitoring		+	+	+	+	completed	
HIL_testbench		+	+	+	+	completed	

Status
- *+ Project status is like planned or better.*
- *0 Project status is a little bit worse than planned.*
- *- A significant deviation has been realized. Escalation is necessary*

progress
- *not started*
- *started*
- *in work*
- *in test or under review*
- *completed*

1.2 Milestone Trend Analysis

Battery Management System											
milestone name	Status #0	Status #1	Status #2	Status #3	Status #4	Status #5	Status #6	Status #7	Status #8	finish	delay
start of project 30.03.2015	01.04.2015	10.04.2015	20.04.2015	01.05.2015	10.05.2015	20.05.2015	01.06.2015	10.06.2015	20.06.2015	01.07.2015	10.07.2015
lab-session 1: communication matrix	13.04.2015	13.04.2015									
lab-session 2: modelling the battery	20.04.2015	20.04.2015	20.04.2015								
lab-session 3: Limit_Monitoring	11.05.2015	11.05.2015	11.05.2015	11.05.2015	11.05.2015						
finish of first subproject and presentation of results	18.05.2015	18.05.2015	18.05.2015	18.05.2015	18.05.2015						
lab-session 4: HIL_testbench	01.06.2015	01.06.2015	01.06.2015	01.06.2015	01.06.2015	25.05.2015	25.05.2015				
lab-session 5: Autocoding	08.06.2015	08.06.2015	08.06.2015	08.06.2015	08.06.2015	08.06.2015	08.06.2015	08.06.2015			
lab-session 6: Balancing	22.06.2015	22.06.2015	22.06.2015	22.06.2015	22.06.2015	22.06.2015	22.06.2015	22.06.2015	22.06.2015		
lab-session 7: Kalmanfilter	29.06.2015	29.06.2015	29.06.2015	29.06.2015	29.06.2015	29.06.2015	29.06.2015	29.06.2015	29.06.2015		
finish of second subproject and presentation of results	06.07.2015	06.07.2015	06.07.2015	06.07.2015	06.07.2015	06.07.2015	06.07.2015	06.07.2015	06.07.2015	06.07.2015	



According to the project milestones, we could generate approximately one week of time-buffer. That has been taken into account for the recalculation of project milestones.

1.3 Budget

Not relevant

2 Progress

2.1 Progress in the last term

In the last term, the program to run on the realtime pc has been prepared.
Thus the battery-model and CAN communication matrix have been integrated.
By the use of a graphical Interface the battery model can be handled to provide test-data for the future BMS.
Furthermore local variables and information received from the BMS are visualized.
When trying to generate executable code from the battery-model algebraic loop where detected, which inhibited the building process to proceed. We solved this problem by inserting “unit-delays” at the concerning positions.
The following steps were made, for evaluation:

- To check if CAN-communication is configured well and all Telegram IDs are connected and processed correctly, a Busmaster-USB-Dongle was used to Receive and Send data.
- The Transmission could be observed in the LabcarEE CAN Bus Monitor
- To check if the balancing of simulated cells is done correctly the corresponding Telegramm with ID 0x221 is send, while battery-parameter are observed on the GUI

2.2 Following steps

In the Following we are going to prepare the program, which will be executed on the BMS (Signal-Processor-Board). Firstly we are going to implement the limit monitoring.
Then evaluation of the cooperation of both devices will be tested

2.3 Current risks

Eventually it will be necessary to do some little changes in the RTPC program due to error-code handling. This might consume a little extra time.

2.4 Decisions

Description	Responsible pers.	Due Date

3 Other comments

Kiel, 01.06.15

The project leader