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3/24/2024

A9

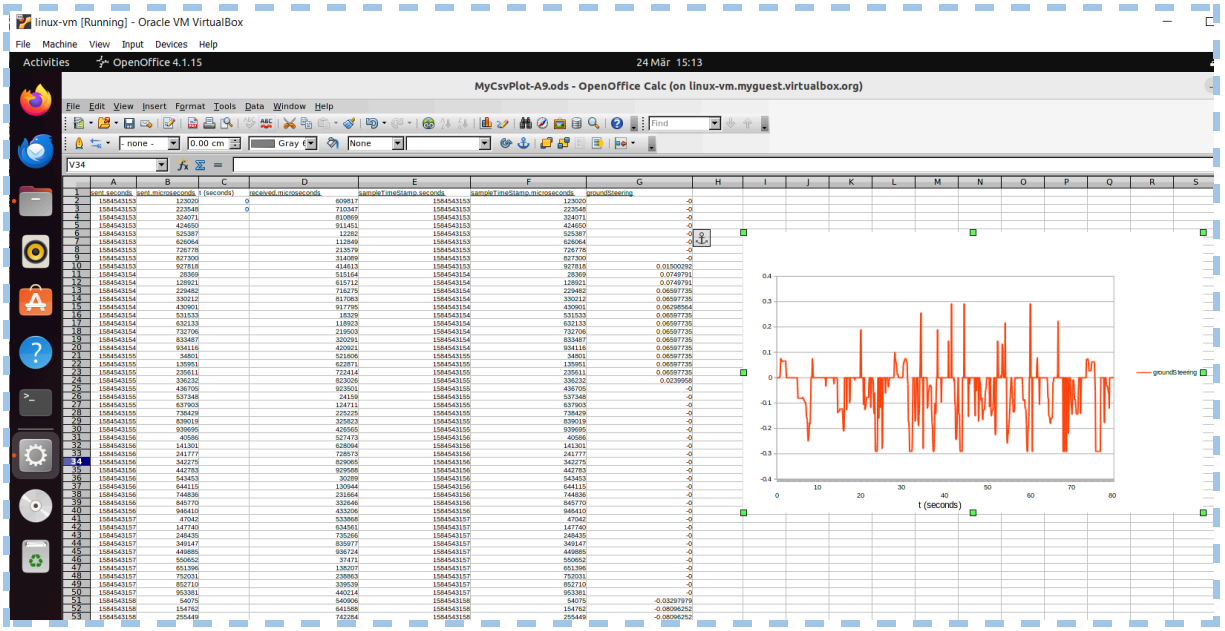
Note: *This document serves the sole purpose of showing a gained understanding in the associated assignment.*

Brief solution walkthrough

1. Run OpenDLV-Vehicle-View
    - *Run provided Canvas/github commands in the shared directory between the host and Virtual Machine.*
2. Locally OpenDLV-Vehicle-View with the network IP to access UI functionality
3. Analyze how the messages' signals change over the course of the video
    - *GroundSteeringRequest's signal is groundSteering, which is numerically constrained to tremendously small numbers close to 0. A negative value represents a right-turn, and a positive implies a left-turn of the vehicle.*
4. Download the .rec file as .csv using the post requests in index.js
5. Import the .csv file to the selected visualization tool (OpenOffice Calc)

	B	C	D	E	F	G
1	sent.microseconds	t (seconds)	received.microseconds	sampleTimeStamp.seconds	sampleTimeStamp.microseconds	groundSteering
2	123020	868	609817	1584543153	123020	-0
3	223548	868	710347	1584543153	223548	-0
4	324071	868	810869	1584543153	324071	-0
5	424650	868	911451	1584543153	424650	-0
6	525387	869	12282	1584543153	525387	-0
7	626064	869	112849	1584543153	626064	-0
8	726778	869	213579	1584543153	726778	-0
9	827300	869	314089	1584543153	827300	-0
10	927810	869	414619	1584543153	927810	-0.01500225
11	28369	869	515164	1584543154	28369	0.0749791
12	128921	869	615712	1584543154	128921	0.0749791
13	229482	869	716275	1584543154	229482	0.06597735
14	330212	869	817083	1584543154	330212	0.06597735
15	430901	869	917795	1584543154	430901	0.06298564
16	531533	870	18329	1584543154	531533	0.06597735
17	632133	870	118923	1584543154	632133	0.06597735
18	732706	870	219503	1584543154	732706	0.06597735
19	833487	870	320291	1584543154	833487	0.06597735
20	934116	870	420921	1584543154	934116	0.06597735
21	34801	870	521606	1584543155	34801	0.06597735
22	135951	870	622871	1584543155	135951	0.06597735
23	235611	870	722414	1584543155	235611	0.06597735
24	336232	870	823026	1584543155	336232	0.0239958
25	436705	870	923501	1584543155	436705	-0
26	537348	871	24159	1584543155	537348	-0
27	637903	871	124711	1584543155	637903	-0
28	738429	871	225225	1584543155	738429	-0
29	839019	871	325823	1584543155	839019	-0
30	939695	871	426565	1584543155	939695	-0
31	40586	871	527473	1584543156	40586	-0
32	141301	871	628094	1584543156	141301	-0
33	241777	871	728573	1584543156	241777	-0
34	342275	871	829065	1584543156	342275	-0
35	442783	871	929588	1584543156	442783	-0
36	543453	872	30289	1584543156	543453	-0
37	644115	872	130944	1584543156	644115	-0

6. Plot graph



- *One problem that emerged was syncing the X-axis labels. As the picture depicts, column C in the .csv file barely stores any values. This is because I manually had to create the desired interval (0s - 80s with 10s increments). In OpenOffice Calc, intervals can only be created with a Date-format. Thus, I concluded that the best way to move forward was to mathematically calculate what rows in column C to assign a value to. In this case, the downloaded file contains 800 rows, whereas the video is 80 seconds, and we want 10 increments. This results in us having to manually add a value at row x_i with the value (i * increment) in the .csv file.*

7. Submission