

Investigation into vehicle motion measurement techniques

Callum Stephenson, css47, GRP173, Car4, Trinity

Department of Engineering, University of Cambridge

Contents

1	Introduction	2
2	Figures, answers to questions & bullet points	3
2.1	Figure 1	3
3	Conclusion	3

1 Introduction

The aim of this report is to determine which techniques for analysing vehicle motion are most accurate, as well as understanding how they are able to track a specific quantity about the vehicle.

Within this report, a model 1:18 488 GTB equipped with sensors will be used in order to investigate the performance of different sensors on the car. Being able to track the motion of a vehicle accurately is useful when trying to determine path, or to change certain values within the engine to increase efficiency or maintain a set speed. One aspect to accuracy is the calibration of a measurement device between digital and real world steps. This is done on the model vehicle within this experiment similarly to how one might calibrate e-steps on a 3D printing machine by counting the movement in the axis comparative to rotation in the stepper motor.

2 Figures, answers to questions & bullet points

2.1 Figure 1

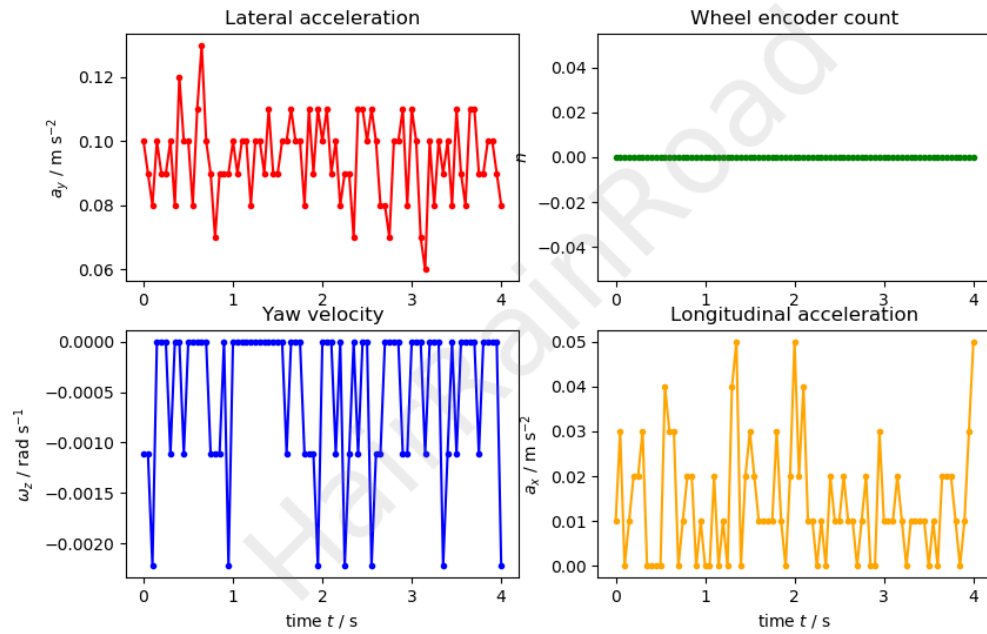


Figure 1

3 Conclusion

References