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Synthchallenge2022

1) Intro

In the context of the synthchallenge2022 we were asked to synthesize the sound of an electric car, as well as that of an instrument. So I can present you the method I used and the results I obtained.

2) Method

First, concerning the sound of the electric car, I started by saving the file "control_signals" in my directory, the functions readtable and table2array allowed me to exploit the file. I then initialized the basic parameters and the sensor datas.

I then displayed a curve of RPM versus time.

I then synthesized the sound of the car using the concomitant synthesis of the for loop.

I ended up creating the file 'car_sound' containing the wav file of the car sound.

The objective was to synthesize the sound from the RPM variations.

3) Result

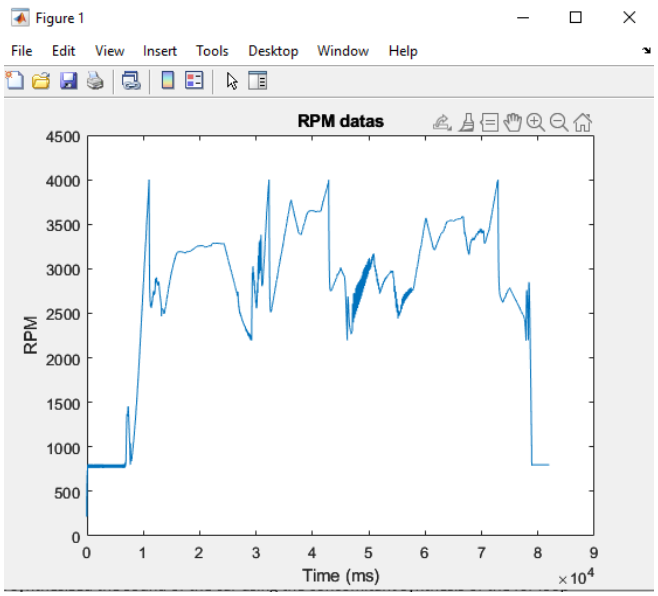

Figure1 : *RPM datas*

We can listen to the synthesized sound by running the program on matlab.

4) Conclusion

We have obtained the sound of an electric vehicle, the sound follows the variations of the RPM of the engine.