STM: Project Vehicle Testing

Artificial driver

Internal

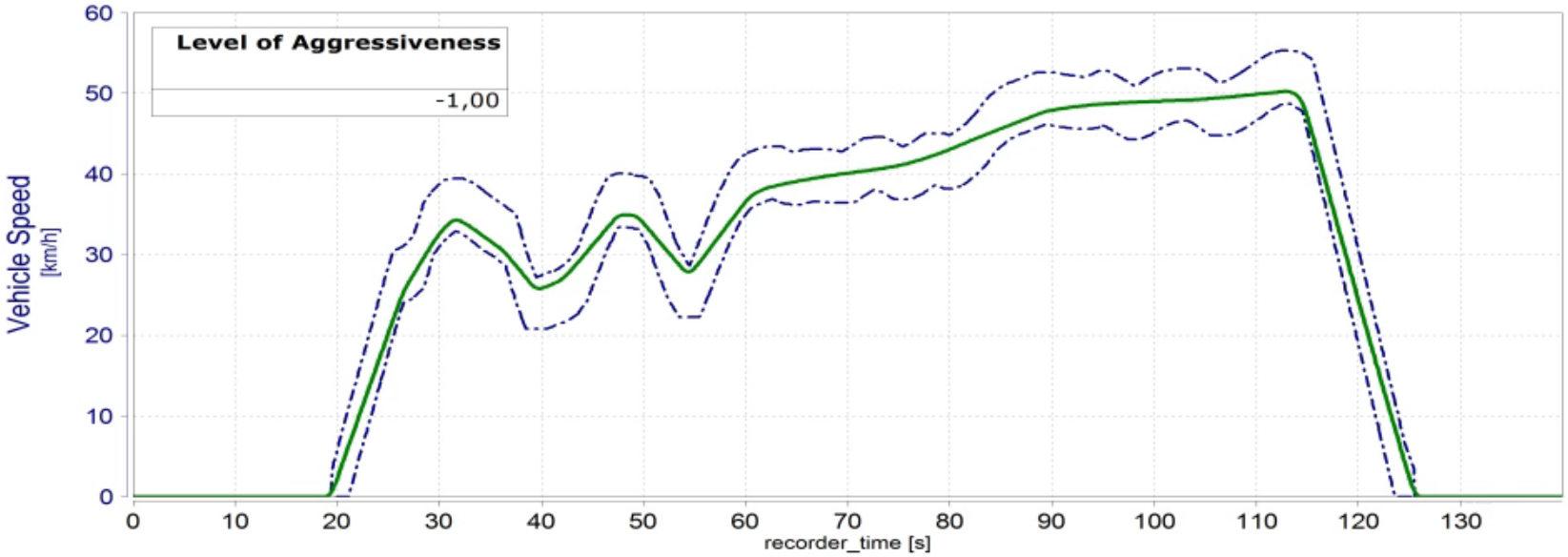
Customer Request

When testing an engine, a powertrain or a vehicle fully automated on a testbed in a 24/7 operation, the utilization of a human driver is an organizational task, that shall be avoided.

First tests with a standard PID controller following the demand speed trace showed significant difference of the energy consumption compared to a human driver, because a human driver uses short cuts, that are not well enough specified in the regulation to be forbidden.

Customer Request

We analyzed manually different driving styles, averaged them and tagged them with a human rated “level of aggressiveness”. The plot visually tells the problem. Allthough it is the same demand speed trace, the way how to drive is depending on the human driver as well as data show the daytime (which is not included here).



Customer Request

As we value the impact of human behaviour during the development process for robustness reasons, we value the reproducibility of testing results in early development stages.

Please provide a software, that delivers a demand speed as shown in the video depending on level of aggressiveness. Please also report theoretical (calculated) difference in energy consumption depending on vehicle parameter.

Please ask all your open questions you need for your development per mail latest 01.12.2023 17:45 to our technical sales Georg.Seewald@avl.com .
We summarize all questions of all suppliers for a final clarification information letter for compliance reasons.

Based on that, we expect a quote including the operational concept of your solution, a delivery date and price per mail latest 14.12.2023 17:00 also to Georg.Seewald@avl.com .