Response to Reviewer 2 Comments

Dear Reviewer2:

We are very grateful to you for reviewing the paper (Manuscript ID: applsci-1880143) so carefully. We have tried our best to improve the manuscript and revised some of the problems you pointed out in the paper.

Responds to your comments:

- Line 328, first names and last names were still in wrong order.

Response: Line 328,we changed the order of first and last names.

18. Zhu, W.X.; Zhang, L.D. A new car-following model for autonomous vehicles flow with mean expected velocity field. *Physica A: Statistical Mechanics and its Applications* **2018**, *492*, 2154–2165. https://doi.org/https://doi.org/10.1016/j.physa.2017.11.133.

- Line 208~212, steady phase and start-stop phase have been redefined in the revised version: steady phase removed the speed constraint; start-stop phase removed dist constraint but added new symbols 'flag' and 'max_speedX_p', the meaning of which has not been explained, making the definition of start-stop phase and steady phase still confusing. Make sure the definition of start-stop and steady phase are exclusive of each other and their union includes all possible situlations.

Response: Line 208-212, very sorry, the 'flag' we described is the start and stop status, not the judging condition, and has been deleted. The complete definition has been modified.

- Make sure the numbers in Figure 5 are still clearly readable if printed in A4 papers.

Response: We have modified the size of font.

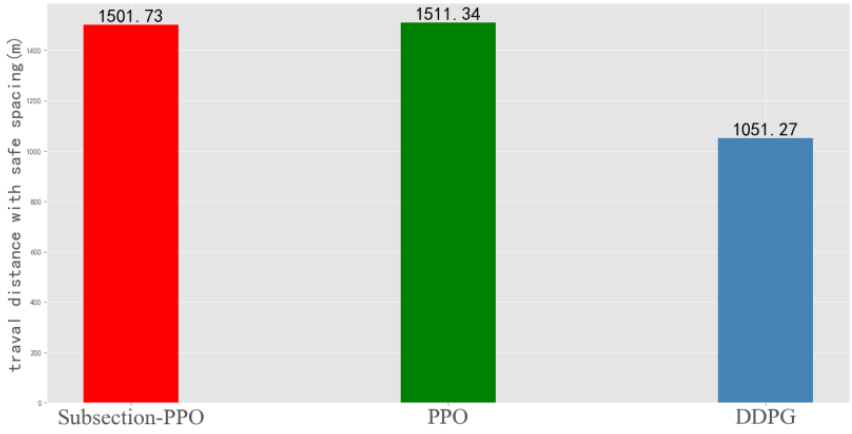


Figure 5. Driving distance to maintain a safe spacing

- The two subplots in Figure 6 are two close - their y axises overlaped.

Response: They are two axes of different scales, representing the change of the spacing between two vehicles with the timestep. We have separated them. At the beginning of the experiment, the initial spacing between the front vehicle and the rear vehicle is 10m, so the initial value of the upper axle is 10. We have made some explanations in figure 6.

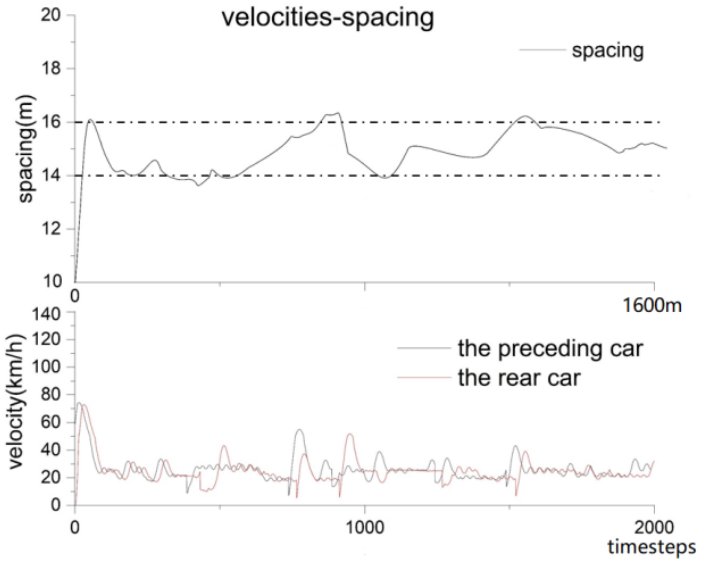


Figure 6. The dotted line indicates the spacing range in the ideal state. Initial vehicle spacing is 10m. The distance traveled using the Subsection-PPO algorithm while maintaining a safe spacing accounted for 93.8% of the total mileage.

Your sincerely,
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