CLAIMS

1. A method of signaling for turns for a vehicle having an autonomous driving mode, the method comprising:

receiving, by one or more processors, a trajectory that the vehicle will follow for some period of time into the future;

processing, by the one or more processors, at least a portion of the trajectory to identify a turning event, the turning event corresponding to a location where the vehicle plans to turn and for which the vehicle will need to use a turn signal;

determining, by the one or more processors, that the trajectory includes a negative turning event located some threshold distance before the turning event, the negative turn event corresponding to a location along the trajectory where the vehicle could make a turn, but does not plan to make a turn;

while the vehicle is operating in the autonomous driving mode, using the negative turning event to suppress activation of the turn signal of the vehicle; and

determining whether to override the suppression based on a type of the turning event, and wherein activating the turn signal of the vehicle is further based on the determination of whether to override the suppression.

2. The method of claim 1, wherein processing at least the portion of the trajectory includes traversing the trajectory starting from a point along the trajectory and moving towards some point in the future along the trajectory.

3. The method of claim 1 or claim 2, wherein the method further comprises determining a direction for the negative turning event, and wherein activating the turn signal based on the turning event is further based on the direction for the negative turning event.

4. The method of any preceding claim, wherein activating the turn signal of the vehicle is further based on a chronological order of the turning event and the negative turning event with respect to the at least the portion of the trajectory.

5. The method of any preceding claim, further comprising:

processing at least the portion of the trajectory to identify a second turning event;

determining a first direction of the negative turning event;

determining a second direction of the second turning event; and

when the second direction is different from the first direction and while the vehicle is operating in the autonomous driving mode, using the second turning event to activate a second turn signal of the vehicle independent of the suppression.

6. The method of any preceding claim, further comprising determining the at least the portion of the trajectory based on a current speed of the vehicle.

7. The method of any of claims 1 to 6, further comprising determining the at least the portion of the trajectory based on an amount of time, or an amount of distance along the trajectory.

8. The method of any preceding claim, wherein the turning event corresponds to a turn from one road onto another road.

9. The method of claim 8, wherein identifying the turning event includes analyzing segments of a roadgraph of map information which the vehicle will traverse when following the trajectory to determine whether the segments meet one or more requirements.

10. The method of any of claims 1 to 7, wherein the turning event corresponds to a lane change.

11. The method of claim 10, wherein identifying the turning event includes comparing the trajectory to a roadgraph of map information and identifying a deviation from a lane.

12. The method of any of claims 1 to 7, wherein the turning event corresponds to the vehicle partially leaving a lane and subsequently returning to the lane.

13. The method of any of claims 1 to 7, wherein the turning event corresponds to the vehicle encountering a merge.

14. The method of any of claims 1 to 7, wherein the turning event corresponds to the vehicle encountering a lane split.

15. The method of any of claims 1 to 7, wherein the turning event corresponds to the vehicle pulling over.

16. The method of any preceding claim, wherein the negative turning event corresponds to a turn onto a road which the vehicle will pass when following the trajectory.

18. The method of any of claims 1 to 15, wherein the negative turning event corresponds to a driveway which the vehicle will pass when following the trajectory.

19. A method of signaling for turns for a vehicle having an autonomous driving mode, the method comprising:

receiving, by one or more processors, a trajectory that the vehicle will follow for some period of time into the future;

processing, by the one or more processors, at least a portion of the trajectory to identify a turning event, the turning event corresponding to a location where the vehicle plans to turn and for which the vehicle will need to use a turn signal;

determining, by the one or more processors, whether the trajectory includes a negative turning event located some threshold distance before the turning event, the negative turn event corresponding to a location along the trajectory where the vehicle could make a turn, but does not plan to make a turn;

while the vehicle is operating in the autonomous driving mode, wherein the determination indicates that the trajectory includes the negative turning event, and

wherein the negative turning event is used to suppress activation of the turn signal of the vehicle thereby temporarily preventing activation of the turn signal of the vehicle based on the turning event.

20. A method of signaling for turns for a vehicle having an autonomous driving mode, the method comprising:

receiving, by one or more processors, a trajectory that the vehicle will follow for some period of time into the future;

processing, by the one or more processors, at least a portion of the trajectory to identify a turning event, the turning event corresponding to a location where the vehicle plans to turn and for which the vehicle will need to use a turn signal;

determining, by the one or more processors, that the trajectory includes a negative turning event located some threshold distance before the turning event, the negative turn event corresponding to a location along the trajectory where the vehicle could make a turn, but does not plan to make a turn;

while the vehicle is operating in the autonomous driving mode, using the negative turning event to suppress activation of the turn signal of the vehicle;

processing at least the portion of the trajectory to identify a second turning event;

determining a first direction of the negative turning event;

determining a second direction of the second turning event; and

when the second direction is different from the first direction and while the vehicle is operating in the autonomous driving mode, using the second turning event to activate a second turn signal of the vehicle independent of the suppression.